

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Leslie Wong Examiner #: 68866 Date: 9/10/03  
 Art Unit: 1761 Phone Number 308-1979 Serial Number: 101006137  
 Mail Box and Bldg/Room Location: CP3 506 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

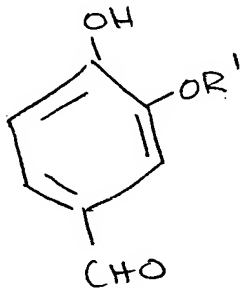
Title of Invention: Warming composition for food and drink or for oral care pref

Inventors (please provide full names): Hiroyasu Kumamoto, Tat suo  
Kitamura

Earliest Priority Filing Date: 12/12/2000

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

looking for formula in an  
 edible composition



## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>EL</u>	NA Sequence (#) _____	STN <u>\$</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>(1)</u>	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic <u>(and)</u>	Link _____
Date Completed: <u>9-11-03</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>5</u>	Fulltext _____	Sequence Systems _____
Clinical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>110</u>	Other _____	Other (specify) _____

=> file reg

FILE 'REGISTRY' ENTERED AT 15:07:53 ON 11 SEP 2003

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=> display history full l1-

FILE 'REGISTRY' ENTERED AT 14:16:06 ON 11 SEP 2003

E 3,4-DIHYDROXYBENZALDEHYDE/CN

L1 1 SEA "3,4-DIHYDROXYBENZALDEHYDE"/CN

E 3-METHOXY-4-HYDROXYBENZALDEHYDE/CN

L2 1 SEA 3-METHOXY-4-HYDROXYBENZALDEHYDE/CN

E 3-ETHOXY-4-HYDROXYBENZALDEHYDE/CN

L3 1 SEA 3-ETHOXY-4-HYDROXYBENZALDEHYDE/CN

FILE 'HCA' ENTERED AT 14:16:46 ON 11 SEP 2003

L4 1612 SEA L1

L5 9275 SEA L2

L6 915 SEA L3

L7 304581 SEA FOOD? OR BEVERAG?

L8 QUE 17/SC,SX

L9 40388 SEA DENTIST? OR DENTAL? OR TOOTHPAST? OR (ORAL? OR TEETH  
OR TOOTH) (2A) (HYGIEN? OR CARE# OR CARING# OR CLEAN? OR  
BRUSH?) OR ORALCAR?

L10 190757 SEA (FLAVOR? OR FLAVOUR? OR SAVOR? OR SAVOUR? OR SAPID?  
OR SAPOR? OR TAST? OR PALAT? OR GUSTAT? OR TOOTH SOME? OR  
DELECTAB? OR SEASON? OR SPICE? OR APPETIZ? OR ORGANOLEP?)  
/BI,AB

L11 140285 SEA (FRAGRAN? OR PERFUM? OR PARFUM? OR COLOGNE? OR ODOR?  
OR AROMA# OR SMELL? OR SCENT? OR OLFACT? OR REDOLENT? OR  
ESSENCE? OR BOUQUET? OR AMBROS? OR ORGANOLEP?)/BI,AB

L12 30 SEA L4 AND L7

L13 109 SEA L4 AND L8

L14 2 SEA L4 AND L9

L15 51 SEA L4 AND (L10 OR L11)

L16 19 SEA L12 AND L13

L17 11 SEA L12 AND L15

L18 24 SEA L13 AND L15

L19 9 SEA L16 AND L18

L20 12 SEA L14 OR L17 OR L19

L21 25 SEA (L16 OR L18) NOT L20

L22 9 SEA L12 NOT (L20 OR L21)

L23 715 SEA L5 AND L7

L24 1490 SEA L5 AND L8

L25 27 SEA L5 AND L9

L26 1596 SEA L5 AND (L10 OR L11)

L27 546 SEA L23 AND L24

L28 410 SEA L23 AND L26

L29 851 SEA L24 AND L26

L30 343 SEA L27 AND L28 AND L29

L31 95407 SEA WARM?  
L32 615510 SEA COOL?  
L33 28716 SEA L31 AND L32  
L34 0 SEA L33 AND L30  
L35 25 SEA L33 AND L5  
L36 7 SEA L35 AND ((L7 OR L8 OR L9 OR L10 OR L11))  
L37 93 SEA L30 AND P/DT  
L38 93 SEA L37 AND (1907-2000/PY OR 1907-2001/PRY)  
L39 878528 SEA (MIXT# OR MIXTURE? OR BLEND? OR ADMIX? OR COMMIX? OR  
IMMIX? OR INTERMIX? OR COMPOSIT? OR COMPN# OR COMPSN# OR  
FORMULAT? OR INTERSPER?)/TI  
L40 11 SEA L38 AND L39  
L41 18 SEA L36 OR L40  
L42 18 SEA L35 NOT L41  
L43 26 SEA L25 NOT (L41 OR L42)  
L44 122 SEA L6 AND L7  
L45 171 SEA L6 AND L8  
L46 12 SEA L6 AND L9  
L47 355 SEA L6 AND (L10 OR L11)  
L48 66 SEA L44 AND L45 AND L47  
L49 29 SEA L48 AND P/DT  
L50 26 SEA L49 AND (1907-2000/PY OR 1907-2000/PRY)  
L51 4 SEA L48 AND L39  
L52 15 SEA L46 OR L51  
L53 20 SEA L50 NOT L52  
L54 4 SEA L33 AND (L4 OR L6)  
L55 1 SEA L54 AND ((L7 OR L8 OR L9 OR L10 OR L11))

=> file hca

FILE 'HCA' ENTERED AT 15:08:08 ON 11 SEP 2003  
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=> d l20 1-12 cbib abs hitstr hitind

L20 ANSWER 1 OF 12 HCA COPYRIGHT 2003 ACS on STN  
139:51801 Chemometric Studies of Vinegars from Different Raw Materials  
and Processes of Production. Natera, Ramon; Castro, Remedios; de  
Garcia-Moreno, Maria; Hernandez, Maria Jesus; Garcia-Barroso,  
Carmelo (Analytical Chemistry Department Faculty of Sciences,  
University of Cadiz, Cadiz, E-11510, Spain). Journal of  
Agricultural and Food Chemistry, 51(11), 3345-3351 (English) 2003.  
CODEN: JAFCAU. ISSN: 0021-8561. Publisher: American Chemical  
Society.  
AB The phenolic compn., **aroma** compds., and org. acid content  
of 83 vinegars have been detd. Multivariate anal. techniques have  
been used to classify these vinegar samples according to raw  
material (white wine, red wine, apple, honey, alc., balsamic, and

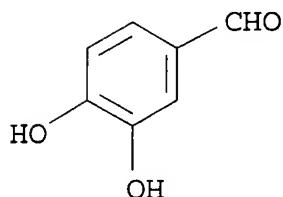
malt) and prodn. process (with and without aging in wood). Cluster anal. grouped the samples according to prodn. process. Only apple and balsamic vinegars were sepd. from wine vinegars. Alc., honey, and malt vinegars were grouped with no aged wine vinegars. Linear discriminate anal. allowed a 88% differentiation according to raw material and 100% according to aging in wood. Besides, from the results obtained, a major role of the volatile compds. in the differentiation of the vinegar samples according to their aging period in wood can be seen.

IT 139-85-5, Protocatechualdehyde

(chemometric studies of vinegars from different raw materials and processes of prodn.)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 17-1 (Food and Feed Chemistry)

IT Food analysis

Food processing

Multivariate analysis

Odor and Odorous substances

Vinegar

Volatile substances

(chemometric studies of vinegars from different raw materials and processes of prodn.)

IT 50-21-5, Lactic acid, analysis 60-12-8, 2-Phenylethanol 64-19-7, Acetic acid, analysis 67-47-0, Hydroxymethylfurfural 77-92-9, Citric acid, analysis 78-83-1, 2-Methyl-1-propanol, analysis 87-69-4, Tartaric acid, analysis 98-01-1, 2-Furaldehyde, analysis 99-50-3, Protocatechuic acid 99-96-7, p-Hydroxybenzoic acid, analysis 100-51-6, Benzyl alcohol, analysis 100-52-7, Benzaldehyde, analysis 101-97-3, Ethyl-2-phenyl acetate 103-45-7, 2-Phenylethyl acetate 110-15-6, Succinic acid, analysis 110-38-3, Ethyl decanoate 121-33-5, Vanillin 121-34-6, Vanillic acid 123-07-9, 4-Ethylphenol 123-08-0, p-Hydroxybenzaldehyde 123-25-1, Diethyl succinate 123-51-3, 3-Methyl-1-butanol 123-66-0, Ethyl hexanoate 123-86-4, n-Butyl acetate 123-92-2, Isoamyl acetate 124-07-2, Octanoic acid, analysis 127-41-3, .alpha.-Ionone 134-96-3, Syringaldehyde 137-32-6, 2-Methyl-1-butanol 139-85-5, Protocatechualdehyde 140-11-4, Benzyl acetate 149-91-7, Gallic acid, analysis 154-23-4, Catechin 327-97-9, Chlorogenic acid 331-39-5, Caffeic acid 334-48-5, Decanoic acid 490-46-0, Epicatechin 501-94-0, Tyrosol 501-98-4, trans-p-Coumaric acid 503-74-2, Isopentanoic acid 513-85-9, 2,3-Butanediol 513-86-0, 3-Hydroxy-2-butanone



530-57-4, Syringic acid 537-73-5, Iso-ferulic acid 539-82-2,  
Ethyl pentanoate 1135-24-6, Ferulic acid 2785-89-9,  
4-Ethylguaiacol 4501-31-9, cis-p-Coumaric acid 6915-15-7, Malic  
acid 27174-07-8 67879-58-7, Caftaric acid 67920-37-0  
74282-22-7 84518-78-5

(chemometric studies of vinegars from different raw materials and  
processes of prodn.)

L20 ANSWER 2 OF 12 HCA COPYRIGHT 2003 ACS on STN

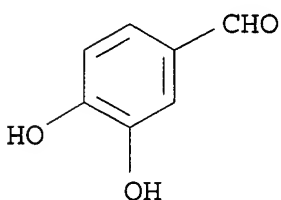
138:253898 Analyzing the headspace of coffee by proton-transfer-reaction  
mass-spectrometry. Yeretzian, Chahan; Jordan, Alfons; Lindinger,  
Werner (Nestle Research Center, Lausanne, CH-1000, Switz.).  
International Journal of Mass Spectrometry, 223-224(1-3), 115-139  
(English) 2003. CODEN: IMSPF8. ISSN: 1387-3806. Publisher:  
Elsevier Science B.V..

AB An extensive anal. of the headspace (HS) of coffee brew using  
proton-transfer-reaction mass-spectrometry (PTR-MS) is presented.  
In particular, a set of methods that link mass spectral peaks, as  
obsd. in PTR-MS, to chem. compds. in the HS of coffee was presented.  
Combining all this information, a tentative assignment and rough  
quantification of liq. coffee HS is presented. Coffee was chosen  
because it contains a large no. of chem. diverse volatile org.  
compds. (VOCs), representing a challenging system for online anal.  
by PTR-MS.

IT 139-85-5, 3,4-Dihydroxybenzaldehyde  
(analyzing the headspace of coffee by proton-transfer-reaction  
MS)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 17-1 (Food and Feed Chemistry)

IT Food analysis

Fragmentation reaction

Mass spectrometry

Odor and Odorous substances

Partition

Proton transfer

Volatile substances

(analyzing the headspace of coffee by proton-transfer-reaction  
MS)

IT Coffee products

(beverages; analyzing the headspace of coffee by  
proton-transfer-reaction MS)

IT 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid,

biological studies 67-47-0, 5-(Hydroxymethyl)furfural 74-89-5, Methylamine, biological studies 74-93-1, Methanethiol, biological studies 78-84-2, Isobutanal 78-98-8, 2-Oxopropanal 79-09-4, Propanoic acid, biological studies 87-66-1, 1,2,3-Benzenetriol 88-14-2, 2-Furancarboxylic acid 90-05-1, 2-Methoxyphenol 95-48-7, o-Cresol, biological studies 96-17-3, 2-Methylbutanal 98-00-0, Furfuryl alcohol 98-01-1, Furfural, biological studies 106-44-5, p-Cresol, biological studies 107-22-2, Ethanediol 107-92-6, Butanoic acid, biological studies 108-10-1, 4-Methyl-2-pentanone 108-39-4, m-Cresol, biological studies 108-50-9, 2,6-Dimethylpyrazine 108-95-2, Phenol, biological studies 109-08-0, Methylpyrazine 110-58-7, Pentylamine 110-86-1, Pyridine, biological studies 111-14-8, Heptanoic acid 112-05-0, Nonanoic acid 116-53-0, 2-Methylbutanoic acid 118-71-8, 3-Hydroxy-2-methyl-4-pyrone 120-80-9, 1,2-Benzenediol, biological studies 121-33-5, Vanillin 123-31-9, 1,4-Benzenediol, biological studies 123-32-0, 2,5-Dimethylpyrazine 123-38-6, Propanal, biological studies 123-75-1, Pyrrolidine, biological studies 124-07-2, Octanoic acid, biological studies 124-40-3, Dimethylamine, biological studies 139-85-5, 3,4-Dihydroxybenzaldehyde 142-62-1, Hexanoic acid, biological studies 290-37-9, Pyrazine 334-48-5, Decanoic acid 431-03-8, 2,3-Butanedione 452-86-8, 4-Methyl-1,2-benzenediol 488-17-5, 3-Methyl-1,2-benzenediol 490-79-9, 2,5-Dihydroxybenzoic acid 533-73-3, 1,2,4-Benzenetriol 556-82-1, 3-Methyl-2-buten-1-ol 590-86-3, 3-Methylbutanal 592-20-1, 2-Oxopropyl acetate 600-14-6, 2,3-Pentanedione 620-02-0, 5-Methylfurfural 623-17-6, Furfuryl acetate 765-70-8, 3-Methyl-1,2-cyclopentanedione 932-16-1, 2-Acetyl-1-methylpyrrole 1003-29-8, 2-Pyrrolicarboxaldehyde 1072-83-9, 2-Acetylpyrrole 1073-96-7, 3,5-Dihydroxy-2-methyl-4-pyrone 1124-39-6, 4-Ethyl-1,2-benzenediol 1192-58-1, 1-Methyl-2-pyrrolicarboxaldehyde 1192-62-7, 2-Acetylfuran 1438-92-2, 1-(2-Furyl)-1,2-propanedione 1438-94-4, 1-Furfurylpyrrole 3188-00-9 3420-59-5, 2-Acetyl-3-hydroxyfuran 3658-77-3, 4-Hydroxy-2,5-dimethyl-3(2H)-furanone 3857-25-8, 5-Methylfurfuryl alcohol 5704-20-1, 2-Hydroxy-3-pentanone 5910-89-4, 2,3-Dimethylpyrazine 6053-02-7 7664-41-7, Ammonia, biological studies 7786-61-0, 2-Methoxy-4-vinylphenol 13360-64-0, 2-Ethyl-5-methylpyrazine 13494-08-1, 3-Ethyl-1,2-cyclopentanedione 13788-32-4 13925-00-3, Ethylpyrazine 13925-03-6, 2-Ethyl-6-methylpyrazine 13925-07-0, 2-Ethyl-3,5-dimethylpyrazine 14400-67-0, 2,5-Dimethyl-3(2H)-furanone 14667-55-1, Trimethylpyrazine 15707-23-0, 2-Ethyl-3-methylpyrazine 15707-34-3, 5-Ethyl-2,3-dimethylpyrazine 23726-93-4, (E)-.beta.-Damascenone 23747-47-9, 6,7-Dihydro-5H-cyclopentapyrazine 23747-48-0, 6,7-Dihydro-5-methyl-5H-cyclopentapyrazine 24677-78-9, 2,3-Dihydroxybenzaldehyde 24683-00-9, 3-Isobutyl-2-methoxypyrazine 27538-09-6, 5-Ethyl-4-hydroxy-2-methyl-3(2H)-furanone 27538-10-9 32736-95-1 37713-48-7 38917-61-2 52006-64-1, Methylthiazole 65330-49-6 68149-78-0, 3,4-Dihydroxycinnamaldehyde 489438-20-2

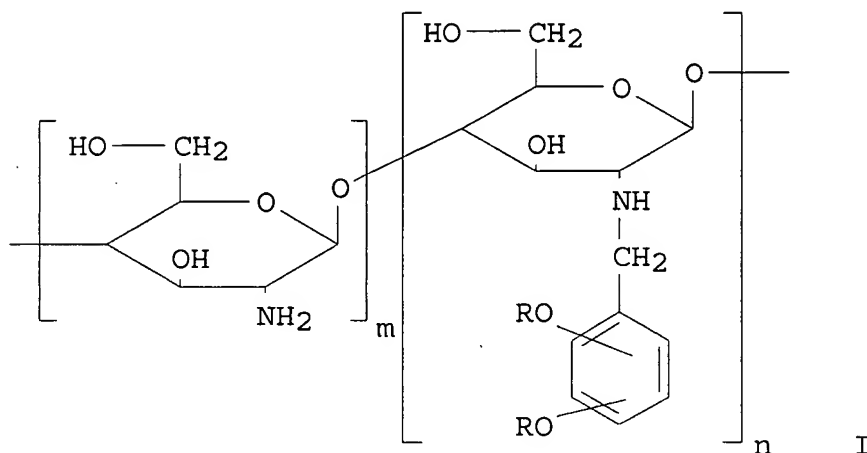
(analyzing the headspace of coffee by proton-transfer-reaction

MS)

L20 ANSWER 3 OF 12 HCA COPYRIGHT 2003 ACS on STN

137:171300 Photocurable N-alkylchitosan derivatives, manufacture thereof, and photocured polymers therefrom. Omura, Yoshihiko; Renbutsu, Akiko; Saimoto, Hiroyuki; Shigemasa, Yoshihiro (Daishin Chemical Co., Ltd., Japan; Omura Paint K. K.). Jpn. Kokai Tokkyo Koho JP 2002226503 A2 20020814, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-22194 20010130.

GI



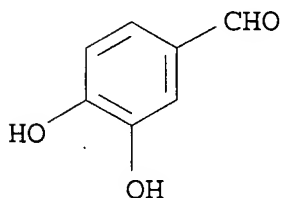
AB The N-alkylchitosan derivs. are I [R = (meth)acryloyl-bearing acyclic unsatd. hydrocarbyl;  $m + n = 1$ ] and prepd. by reductive benzylation of chitosan with  $\text{HOCC}_6\text{H}_3(\text{OR})_2$  [R = same definition as above]. Photocured I are useful for contact lenses, **dental** materials, primers for electroless plating, etc. Thus, chitosan was reacted with 3,4-bis(2-hydroxy-3-methacryloyloxypropoxy)benzaldehyde for benzylation degree (n) 0.1 and photocured to give a film showing Pd adsorption 0.46 mg/20-mg film in 3-min immersion in  $\text{PdCl}_2$  bath (pH 1.1) under shaking.

IT 139-85-5

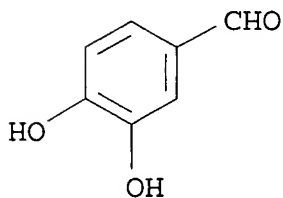
(manuf. of photocurable N-alkylchitosan derivs. for plating primers and pharmaceutical uses)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)

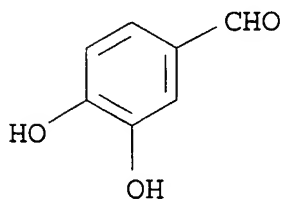


- IC ICM C08B037-08  
ICS C08F002-48; C08F299-00
- CC 44-5 (Industrial Carbohydrates)  
Section cross-reference(s): 56, 63
- ST photocurable alkylchitosan contact lens **dental** good;  
hydroxymethacryloyloxypropoxybenzaldehyde modified photocured  
chitosan electroless plating primer
- IT Contact lenses  
**Dental** materials and appliances  
(manuf. of photocurable N-alkylchitosan derivs. for plating  
primers and pharmaceutical uses)
- IT 106-91-2, Glycidyl methacrylate **139-85-5**  
(manuf. of photocurable N-alkylchitosan derivs. for plating  
primers and pharmaceutical uses)
- L20 ANSWER 4 OF 12 HCA COPYRIGHT 2003 ACS on STN  
137:37652 Warming compositions containing benzaldehydes for **food**  
and drink or for **oral care** formulations.  
Kumamoto, Hiroyasu; Kitamura, Tatsuo (Takasago International  
Corporation, Japan). Eur. Pat. Appl. EP 1215258 A2 20020619, 13 pp.  
DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,  
LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR.  
(English). CODEN: EPXXDW. APPLICATION: EP 2001-403207 20011212.  
PRIORITY: JP 2000-376814 20001212.
- AB This invention relates to a warming compn. for **food** and  
drink or for **oral care** prepns. which produce an  
excellent and long-lasting warming effect and cause no or little  
irritation to mucous membranes. A **flavor** compn. for  
**food** and drink or for **oral care** prepns.  
comprising **beverages** or **oral care**  
prepns. is also disclosed. Thus, a candy formulation contained  
vanillin 0.005, CA-10 0.005, granulated sugar 52.3, starch syrup  
46.6, citric acid 1, and **flavor** 0.09%. The candy produced  
a warming effect in the the throat.
- IT **139-85-5**, 3,4-Dihydroxybenzaldehyde  
(warming compns. contg. benzaldehydes for **food** and  
drink or for **oral care** formulations)
- RN 139-85-5 HCA  
CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



- IC ICM C09K005-00  
ICS A23L001-30; A61K007-00
- CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 17, 62

- ST warming compn food drink; benzaldehyde oral  
care
- IT **Beverages**  
Candy  
Chewing gum  
Dentifrices  
**Flavor**  
**Food**  
Human  
Mouthwashes  
(warming compns. contg. benzaldehydes for food and  
drink or for oral care formulations)
- IT 121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5, Vanillin  
139-85-5, 3,4-Dihydroxybenzaldehyde 82654-98-6, Vanillyl  
butyl ether 195863-84-4, TPG 1 207792-35-6, CA 10  
(warming compns. contg. benzaldehydes for food and  
drink or for oral care formulations)
- L20 ANSWER 5 OF 12 HCA COPYRIGHT 2003 ACS on STN
- 137:32262 Removal of iron, copper and manganese from white wines through  
ion exchange techniques: effects on their organoleptic  
characteristics and susceptibility to browning. Benitez, P.;  
Castro, R.; Barroso, C. G. (Analytical Chemistry Department, Faculty  
of Sciences, University of Cadiz, Cadiz, E-11510, Spain). Analytica  
Chimica Acta, 458(1), 197-202 (English) 2002. CODEN: ACACAM. ISSN:  
0003-2670. Publisher: Elsevier Science B.V..
- AB Ion exchange techniques were used to reduce the content of Fe, Cu,  
and Mn in white wines. 2 Exchanger resins were compared, a  
chelating resin, the active group of which is iminodiacetate and a  
Dowex, acidic cation exchange resin. The results obtained show that  
the technique of using exchanger resins is extremely effective in  
lowering the metal content of wines, although on occasions, their  
use alters the organoleptic characteristics of the wine.  
Treated wines present lower polyphenolic and arom. profiles than the  
untreated wines. Polyphenolic and metallic redns. would explain why  
treated wines present a notably reduced susceptibility to browning.
- IT 139-85-5, Protocatechualdehyde  
(ion exchange to reduce the content of Fe, Cu, and Mn in white  
wines and effects on phenolic content)
- RN 139-85-5 HCA
- CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)

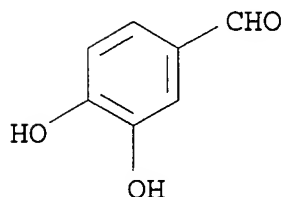


- CC 17-1 (Food and Feed Chemistry)
- ST iron copper manganese ion exchange wine analysis; metal ion exchange

- wine **flavor** browning  
 IT Browning (**food**)  
     **Flavor**  
     **Food** processing  
     Wine analysis  
         (ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on **organoleptic** characteristics and browning)
- IT Metals, analysis  
     (ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on **organoleptic** characteristics and browning)
- IT Wine  
     (white; ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on **organoleptic** characteristics and browning)
- IT 60-12-8, 2-Phenylethanol 64-19-7, Acetic acid, analysis 71-23-8, n-Propanol, analysis 78-83-1, Isobutanol, analysis 79-31-2, 2-Methylpropanoic acid 97-64-3, Ethyl lactate 100-51-6, Benzyl alcohol, analysis 103-45-7, 2-Phenylethyl acetate 106-32-1, Ethyl octanoate 109-52-4, Valeric acid, analysis 123-51-3 123-92-2, Isoamyl acetate 503-74-2, 3-Methylbutanoic acid 513-85-9, 2,3-Butanediol 513-86-0, 3-Hydroxy-2-butanone 565-60-6, 3-Methyl-2-pentanol 6032-29-7, 2-Pentanol 6570-87-2, 3,4-Dimethylpentanol 35296-72-1, Butanol  
     (ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on **organoleptic** characteristics and browning)
- IT 7439-96-5, Manganese, analysis 7440-50-8, Copper, analysis  
     (ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on **organoleptic** characteristics and browning)
- IT 7439-89-6, Iron, biological studies  
     (ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on **organoleptic** characteristics and browning)
- IT 139-85-5, Protocatechualdehyde 149-91-7, Gallic acid, analysis 501-94-0, Tyrosol 530-57-4, Syringic acid  
     (ion exchange to reduce the content of Fe, Cu, and Mn in white wines and effects on phenolic content)
- L20 ANSWER 6 OF 12 HCA COPYRIGHT 2003 ACS on STN  
 135:226185 The use of activated charcoal in combination with other fining agents and its influence on the **organoleptic** properties of sherry wine. Lopez, Sebastian; Castro, Remedios; Garcia, Esmeralda; Pazo, Jose Antonio S.; Barroso, Carmelo G. (Analytical Chemistry Department, Faculty of Sciences, University of Cadiz, Cadiz, 11510, Spain). European Food Research and Technology, 212(6), 671-675 (English) 2001. CODEN: EFRTFO. ISSN: 1438-2377. Publisher: Springer-Verlag.
- AB Fining expts. have been conducted on fino sherry wine from the Jerez-Xeres-Sherry region (southern Spain), in which the combined

use of activated charcoal with proteinaceous fining agents (casein, potassium caseinate, albumin, and gelatin) has been studied. The effect of these fining agents on the polyphenolic content, the arom. profile, and the resistance to browning of the treated wine has been detd. The polyphenolic content suffers significant decreases following the use of activated charcoal; these decreases are only increased slightly by the subsequent use of the other fining agents. The arom. profile was not found to be altered by the clarification agents used. Despite the redn. in the polyphenolic content, the treated wines show a tendency to suffer browning similar to that obsd. in non-clarified wine.

- IT 139-85-5, Protocatechualdehyde  
 (activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- RN 139-85-5 HCA
- CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



- CC 17-13 (Food and Feed Chemistry)
- IT Browning (**food**)  
 Clarification  
**Flavor**  
**Odor and Odorous substances**  
 (activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Volatile organic compounds  
 (activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Caseins, biological studies  
 (activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Gelatins, biological studies  
 (activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Ovalbumin  
 (activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Charcoal  
 (activated; activated charcoal use in combination with other

- fining agents and influence on **organoleptic** properties of sherry wine)
- IT Phenols, biological studies  
(polyphenols, nonpolymeric; activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Caseins, biological studies  
(potassium complexes; activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Wine  
(sherry; activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT Bentonite, biological studies  
(sodian; activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)
- IT 64-19-7, Acetic acid, biological studies 67-56-1, Methanol, biological studies 78-83-1, Isobutanol, biological studies 79-31-2, 2-Methylpropanoic acid 97-64-3, Ethyllactate 100-51-6, Benzylalcohol, biological studies 107-88-0, 1,3 Butanediol 107-92-6, Butyric acid, biological studies 108-95-2, Phenol, biological studies 111-27-3, 1-Hexanol, biological studies 123-08-0, p-Hydroxybenzaldehyde 123-25-1, Diethyl succinate 123-51-3 124-07-2, Octanoic acid, biological studies 139-85-5, Protocatechualdehyde 142-62-1, Hexanoic acid, biological studies 154-23-4, Catechin 327-97-9, Chlorogenic acid 331-39-5, Caffeic acid 501-98-4, trans-p-Coumaric acid 503-74-2, Isovaleric acid 513-85-9, 2,3-Butanediol 513-86-0 537-73-5, Iso-Ferulic acid 818-38-2, Diethyl glutarate 1135-24-6, Ferulic acid 4501-31-9, cis-p-Coumaric acid 7554-12-3, Diethyl malate 27174-07-8 67879-58-7, Caftaric acid 67920-37-0 100045-65-6  
(activated charcoal use in combination with other fining agents and influence on **organoleptic** properties of sherry wine)

L20 ANSWER 7 OF 12 HCA COPYRIGHT 2003 ACS on STN

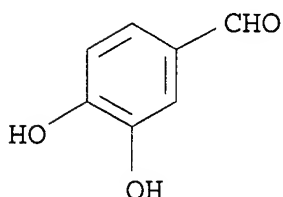
120:29617 Determination of vanillin and related **flavor** compounds in natural vanilla extracts and vanilla-**flavored foods** by thin layer chromatography and automated multiple development. Belay, M. T.; Poole, C. F. (Dep. Chem., Wayne State Univ., Detroit, MI, 48202, USA). Chromatographia, 37(7-8), 365-73 (English) 1993. CODEN: CHRGB7. ISSN: 0009-5893.

AB Thin layer chromatog. on silica gel high performance layers and automated multiple development was used to sep. the polar arom. **flavor** compds. vanillin, Et vanillin, 4-hydroxybenzaldehyde, 4-hydroxybenzoic acid, 4-hydroxybenzyl alc., vanillic acid, coumarin, piperonal, anisic acid, and anisaldehyde commonly found in exts. of natural and artificial vanilla **flavors**. The ratio of 4-hydroxybenzoic acid, 4-hydroxybenzaldehyde and vanillic acid to vanillin in natural vanilla exts. was used to confirm the



authenticity of exts. purchased in the United States of America and the United Kingdom. Natural vanilla exts. purchased in Mexico and Puerto Rico were identified as counterfeit products based on changes in the above ratio and the presence of synthetic **flavor** compds. such as Et vanillin and coumarin. It is also demonstrated that the proposed method is suitable for the detn. of natural and synthetic vanilla **flavors** in solvent exts. from **food, beverage** and confectionery products. The main advantage of thin layer chromatog. for the anal. of vanilla exts. and **food** stuffs **flavored** with vanilla is its high sample throughput since sample prepn. requirements are minimal and multiple samples can be sepd. simultaneously.

IT 139-85-5, 3,4-Dihydroxybenzaldehyde  
(detn. of, in vanilla ext. or vanilla-**flavored**  
**food**, by TLC)  
RN 139-85-5 HCA  
CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



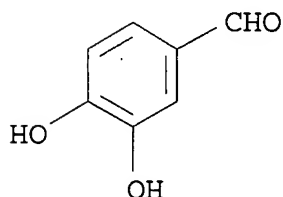
CC 17-1 (Food and Feed Chemistry)  
Section cross-reference(s): 4  
IT Chromatography, thin-layer  
(of vanillin and related compds., in vanilla ext. or vanilla-**flavored food**)  
IT **Food** analysis  
(vanillin and related compds. detn. in vanilla-**flavored**  
, by TLC)  
IT 91-64-5, Coumarin 99-96-7, 4-Hydroxybenzoic acid, analysis  
120-57-0, Piperonal 121-32-4, Ethylvanillin 121-33-5, Vanillin  
121-34-6, Vanillic acid 123-08-0, 4-Hydroxybenzaldehyde  
139-85-5, 3,4-Dihydroxybenzaldehyde 530-57-4, Syringic  
acid 623-05-2, 4-Hydroxybenzyl alcohol 1335-08-6 50984-52-6,  
Anisaldehyde  
(detn. of, in vanilla ext. or vanilla-**flavored**  
**food**, by TLC)  
L20 ANSWER 8 OF 12 HCA COPYRIGHT 2003 ACS on STN  
119:179519 HPLC analysis of ethanolic oak extracts with UV,  
fluorescence, and electrochemical detection. Baran, Helga; Schwedt,  
Georg (Inst. Anorg. Anal. Chem., Tech. Univ. Clausthal,  
Clausthal-Zellerfeld, W-3392, Germany). Zeitschrift fuer  
Lebensmittel-Untersuchung und -Forschung, 196(4), 370-4 (German)  
1993. CODEN: ZLUFAR. ISSN: 0044-3026.  
AB Reversed-phase HPLC with UV diode array, fluorescence, and  
electrochem. multidetection systems was tested for its applicability

for the detn. of compds. in alc. oak exts. Compds. were thus identified as lignin degrdn. products, gallic acid, and scopoletin by UV spectra, hydrodynamic voltammograms, and fluorescence data following sepn. through Lichrospher RP 18 columns. Detection limits of nanograms (UV, fluorescence) or picograms (electrochem.) are reported.

IT 139-85-5  
(detn. of, in alc. oak exts., HPLC with multidetection systems for, for brandy and spirits anal.)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 17-1 (Food and Feed Chemistry)

IT Flavor

(tannins and other lignin-degrdn. products in, detn. of, in brandies and spirits, HPLC with multidetection systems for)

IT Alcoholic beverages

(brandy, tannins and other lignin-degrdn. products detn. in, HPLC with multidetection systems for)

IT Alcoholic beverages

(spirits, tannins and other lignin-degrdn. products detn. in, HPLC with multidetection systems for)

IT 64-17-5

(alc. beverages, brandy, tannins and other lignin-degrdn. products detn. in, HPLC with multidetection systems for)

IT 69-72-7, analysis 92-61-5, Scopoletin 99-50-3 108-46-3, 1,3-Benzenediol, analysis 121-33-5, Vanillin 121-34-6 123-08-0, 4-Hydroxybenzaldehyde 123-31-9, Hydroquinone, analysis 134-96-3, Syringic aldehyde 139-85-5 149-91-7, Gallic acid, analysis 154-23-4, Catechin, analysis 530-57-4, Syringic acid 1135-24-6, Ferulic acid 7400-08-0, p-Cumaric acid 9005-53-2D, Lignin, degrdn. products (detn. of, in alc. oak exts., HPLC with multidetection systems for, for brandy and spirits anal.)

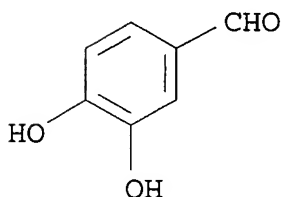
L20 ANSWER 9 OF 12 HCA COPYRIGHT 2003 ACS on STN

110:133794 Analysis of vanilla essences by high-performance liquid chromatography. Archer, Alan W. (Div. Anal. Lab., New South Wales Dep. Health, Lidcombe, 2141, Australia). Journal of Chromatography, 462, 461-6 (English) 1989. CODEN: JOCRAM. ISSN: 0021-9673.

AB Vanilla essences contain vanillin as the major arom. compd. and vanillic acid, vanillyl alc., p-hydroxybenzaldehyde,

p-hydroxybenzoic acid, p-hydroxybenzyl alc., and 3,4-dihydroxybenzaldehyde in smaller concns. Et vanillin, a synthetic vanillin analog, may be present as an additive in vanilla **essences**. A HPLC method used for the anal. of vanilla **essence** was based on a Microsorb C18 reversed-phase column., an aq. mixt. of MeOH, MeCN, and AcOH as the mobile phase, and phenoxyacetic acid as internal std.

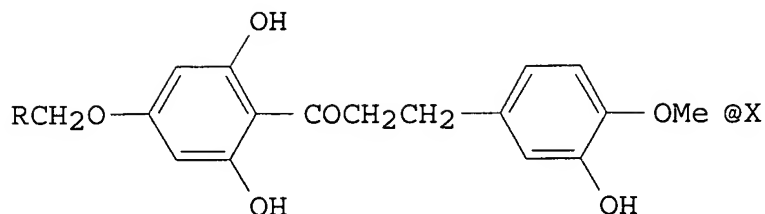
IT 139-85-5, 3,4-Dihydroxybenzaldehyde  
(HPLC of, in vanilla **essence**)  
RN 139-85-5 HCA  
CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 17-1 (Food and Feed Chemistry)  
Section cross-reference(s): 62  
ST vanilla **essence** HPLC; chromatog liq vanilla **essence**; vanillin vanilla **essence**  
IT Vanilla **fragrans**  
Vanilla tahitensis  
(HPLC anal. of **essences** of)  
IT Food analysis  
(vanilla **essences** anal. in, by HPLC)  
IT 99-96-7, p-Hydroxybenzoic acid, biological studies 121-32-4, Ethyl vanillin 121-33-5, Vanillin 121-34-6, Vanillic acid 123-08-0, p-Hydroxy-benzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde 498-00-0, Vanillyl alcohol 623-05-2, p-Hydroxybenzyl alcohol  
(HPLC of, in vanilla **essence**)

L20 ANSWER 10 OF 12 HCA COPYRIGHT 2003 ACS on STN  
94:137933 Dihydrochalcone sweeteners. A study of the atypical temporal phenomena. DuBois, Grant E.; Crosby, Guy A.; Stephenson, Rebecca A. (Chem. Synth. Lab., Dynapol, Palo Alto, CA, 94304, USA). Journal of Medicinal Chemistry, 24(4), 408-28 (English) 1981. CODEN: JMCMAR. ISSN: 0022-2623.

GI



II, R=COCH<sub>2</sub>CO<sub>2</sub>H, X=Na

III, R=CH<sub>2</sub>CH<sub>2</sub>PO<sub>3</sub>H<sub>2</sub>, X=K

IV, R=CH<sub>2</sub>NHSO<sub>3</sub>H, X=K

V, R=CH<sub>2</sub>CH(OH)CO<sub>2</sub>H, X=Na

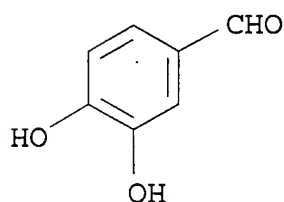
AB Neohesperidin dihydrochalcone (I) [20702-77-6] has 340 times the sweetness of sucrose, but is not much used as a sweetener because of its poor temporal properties, i.e. the sweetness is slow to develop in the mouth and there is a prolonged, unpleasant aftertaste. Forty-four analogs of I were synthesized and tested to det. whether the temporal properties of I were due to metab., conformation, chelation, or hydrophobicity. None of these possibilities were strongly supported. Four of the analogs, II [76799-09-2], III [76799-10-5], IV [70412-97-4], and V [76799-11-6] were 280-440 times sweeter than sucrose and may be useful in some food systems. However, their temporal taste characteristics were no better than those of I.

IT 139-85-5

(reaction of, with benzyl chloride)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 17-2 (Foods)

ST dihydrochalcone sweetener structure taste

IT 139-85-5 327-97-9 699-83-2 23643-71-2  
(reaction of, with benzyl chloride)

L20 ANSWER 11 OF 12 HCA COPYRIGHT 2003 ACS on STN

85:121714 Separation and automatic determination of benzoic and cinnamic aldehydes by liquid phase chromatography. Alibert, Gilbert; Puech, Jean L. (Cent. Physiol. Veg., Univ. Paul Sabatier, Toulouse, Fr.).

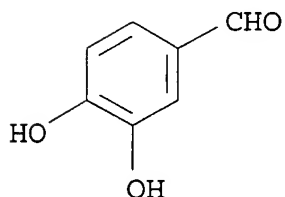
Journal of Chromatography, 124(2), 369-75 (French) 1976. CODEN: JOCRAM. ISSN: 0021-9673.

AB Due to their frequent occurrence in vegetables and their participation in the **aroma** of alc. **beverages**, benzaldehyde [100-52-7] and cinnamaldehyde [104-55-2] and 9 of their derivs. were sepd. and detd. automatically by chromatog. in aged brandy. After evapn. of the alc., the aq. phase was adjusted to pH 9 and dild. with Et2O; the phenolic aldehydes then were purified by preparative thin-layer chromatog. by using the solvent systems hexane-Et2O-CH2Cl2-AcOH (4:3:1:2) and petroleum ether-isoamyl alc.-HCO2H (100:30:0.25). The aldehydes then were detd. automatically and spectrometrically at 260, 310, and 340 nm.

IT 139-85-5  
(detn. of, in brandy, chromatog.)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 16-1 (Fermentations)

IT Alcoholic **beverages**  
(brandy, benzoic and cinnamic aldehydes detn. in, chromatog.)

IT 100-52-7, analysis 100-83-4 104-55-2 121-33-5 123-08-0  
123-11-5 134-96-3 139-85-5 458-36-6 621-59-0  
4206-58-0

(detn. of, in brandy, chromatog.)

L20 ANSWER 12 OF 12 HCA COPYRIGHT 2003 ACS on STN

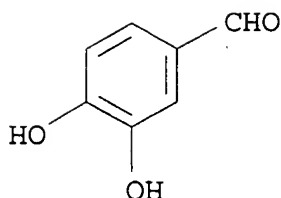
36:39752 Original Reference No. 36:6263g,6264a Ethers of protocatechualdehyde. Kyrides, Lucas P. (Monsanto Chemical Co.). US 2284287 19420526 (Unavailable). APPLICATION: US .

AB Various details are given for the prepn. and use of **food-flavoring** compds. of the general formula CH: CX.C(OH): CH.CH:CCHO in which X is a phenoxy, methylphenoxy, ethylphenoxy or cyclohexyloxy radical, such as 3-phenoxy-4-hydroxybenzaldehyde and 3-cyclohexyloxy-4-hydroxybenzaldehyde.

IT 139-85-5, Protocatechualdehyde  
(ethers)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 12 (Foods)  
 IT **Flavoring** materials  
 (protocatechualdehyde ethers)  
 IT **139-85-5**, Protocatechualdehyde  
 (ethers)

=> d 122 1-9 cbib abs hitstr hitind

L22 ANSWER 1 OF 9 HCA COPYRIGHT 2003 ACS on STN

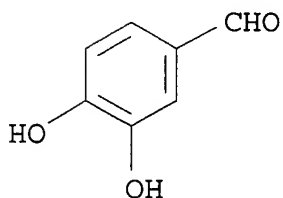
135:147448 Remedies for diseases with a need for the enhancement of nerve growth factor. Ohnogi, Hiromu; Shiraga, Masahiro; Kobayashi, Eiji; Li, Tuo Ping; Deguchi, Suzu; Nishiyama, Eiji; Sagawa, Hiroaki; Kato, Ikunoshin (Takara Shuzo Co., Ltd., Japan). PCT Int. Appl. WO 2001054682 A1 20010802, 79 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2001-JP513 20010126. PRIORITY: JP 2000-19208 20000127; JP 2000-19331 20000127; JP 2000-308519 20000610; JP 2000-254683 20000824.

AB Disclosed are remedies or preventives for diseases with a need for the enhancement of the prodn. of nerve growth factor (NGF) which contain as the active ingredient specific compds. having an activity of enhancing the prodn. of NGF or salts thereof, agents for enhancing the prodn. of NGF, or **foods**, drinks or feeds for enhancing the prodn. of NGF; a method of enhancing the prodn. of NGF which comprises administering the above compds. or salts thereof to mammals; and use of the above compds. or salts thereof in remedies or preventives for diseases with a need for the enhancement of the prodn. of NGF, agents for enhancing the prodn. of NGF, or **foods**, drinks or feeds for enhancing the prodn. of NGF. Also, novel compds. having an activity of enhancing the prodn. of NGF are provided. Butein was prepd. and its NGF-promoting effect in rats were examd. An injection compn. contg. butein 0.5 % was also formulated.

IT **139-85-5**, 3,4-Dihydroxybenzaldehyde  
 (prepn. of nerve growth factor enhancers for treatment of related disease)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



IC A61K031-12; A61K031-216; A61K031-352; A61K031-7004; A61P025-00;  
 A61P025-28; A61P009-10; A61P043-00; A23L001-30; C07C049-83;  
 C07C049-255; C07C049-84; C07C049-573; C07C069-12

CC 1-11 (Pharmacology)

Section cross-reference(s): 18, 63

IT **Beverages**

Feed

**Food**

(nerve growth factor enhancers for treatment of related disease)

IT 67-64-1, Acetone, reactions 89-84-9, 2',4'-Dihydroxyacetophenone  
 108-18-9, Diisopropylamine 118-93-4, 2'-Hydroxyacetophenone  
 139-85-5, 3,4-Dihydroxybenzaldehyde 528-21-2,  
 2',3',4'-Trihydroxyacetophenone 829-20-9, 2',4'-  
 Dimethoxyacetophenone 1660-04-4, 1-Adamantyl methyl ketone  
 2234-16-4, 2',4'-Dichloroacetophenone 5707-55-1,  
 3,4-Dihydroxyphenylacetaldehyde  
 (prepn. of nerve growth factor enhancers for treatment of related  
 disease)

L22 ANSWER 2 OF 9 HCA COPYRIGHT 2003 ACS on STN

133:349576 Inhibition of .beta.-carotene-15,15'-dioxygenase activity by  
 dietary flavonoids. Nagao, Akihiko; Maeda, Maki; Lim, Boey Peng;  
 Kobayashi, Hidetaka; Terao, Junji (National Food Research Institute,  
 Ministry of Agriculture, Forestry and Fisheries, Tsukuba, Ibaraki,  
 305-8642, Japan). Journal of Nutritional Biochemistry, 11(6),  
 348-355 (English) 2000. CODEN: JNBIEL. ISSN: 0955-2863.  
 Publisher: Elsevier Science Inc..

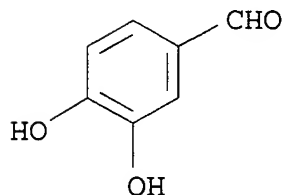
AB The .beta.-carotene-15,15'-dioxygenase is an enzyme responsible for  
 providing vertebrates with vitamin A by catalyzing oxidative  
 cleavage of .beta.-carotene at its central double bond to 2 mols. of  
 retinal in intestinal cells. We evaluated the effects of  
 antioxidants and dietary flavonoids on the .beta.-carotene  
 dioxygenase activity in vitro using pig intestinal mucosa  
 homogenates as the enzyme source. The synthetic antioxidant  
 2,6-di-tert-butyl-4-methylphenol (BHT) strongly inhibited the  
 activity at 10<sup>-6</sup> M (mixed-type inhibition), whereas butylated  
 hydroxyanisole (BHA), nordihydroguaiaretic acid, Pr gallate, and  
 curcumin were moderately inhibitory. Flavonoids (luteolin,  
 quercetin, rhamnetin, phloretin) remarkably inhibited the  
 dioxygenase activity noncompetitively, whereas flavanones,  
 isoflavones, catechins, and anthocyanidins were less inhibitory.

The structure-activity relationship indicated that catechol structure of the B ring and planar flavone structure were essential for the inhibition. The enzyme inhibition was also indicated in the cultured Caco-2 cells by the decreased conversion of .beta.-carotene to retinol when incubated with BHT and rhamnetin at 2 and 5 .mu.M, resp. Thus, some antioxidants from food sources may modulate the conversion of .beta.-carotene to vitamin A in intestinal cells.

IT 139-85-5, Protocatechualdehyde  
(dietary flavonoids inhibition of .beta.-carotene-15,15'-dioxygenase activity in pig intestinal homogenates and Caco-2 cells)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)

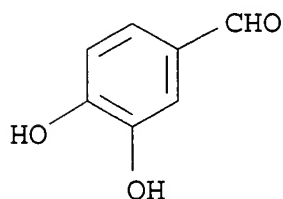


CC 18-7 (Animal Nutrition)  
Section cross-reference(s): 7

IT 50-81-7, Vitamin c, biological studies 60-00-4, Edta, biological studies 60-82-2, Phloretin 66-71-7, 1,10-Phenanthroline 67-43-6, Diethylenetriamine pentaacetic acid 87-66-1, Pyrogallol 90-19-7, Rhamnetin 92-52-4, 1,1'-Diphenyl, biological studies 117-39-5, Quercetin 120-80-9, Catechol, biological studies 121-33-5, Vanillin 121-79-9, Propyl gallate 128-37-0, Bht, biological studies 134-01-0, Peonidin 134-04-3, Pelargonidin 137-66-6, Ascorbyl palmitate 138-14-7, Desferrioxamine mesylate 139-85-5, Protocatechualdehyde 153-18-4, Rutin 154-23-4, + Catechin 327-97-9, Chlorogenic acid 331-39-5, Caffeic acid 366-18-7, .alpha.,.alpha.'-Dipyridyl 404-86-4, Capsaicin 446-72-0, Genistein 458-37-7, Curcumin 480-18-2, Taxifolin 480-19-3, Isorhamnetin 480-40-0, Chrysin 481-53-8, Tangeretin 486-66-8, Daidzein 487-26-3, Flavanone 490-46-0, -Epicatechin 491-70-3, Luteolin 500-38-9, Ndga 520-18-3, Kaempferol 520-33-2, Hesperetin 525-82-6, Flavone 528-53-0, Delphinidin 528-58-5, Cyanidin 529-44-2, Myricetin 574-12-9, Isoflavone 577-85-5, Flavonol 970-74-1, -Epigallocatechin 989-51-5, -Epigallocatechin gallate 1083-30-3, Dihydrochalcone 1135-24-6, Ferulic acid 1151-98-0, Apigenidin 1257-08-5 1948-33-0, Tbhq 15181-11-0, 3,5-Di-tert-butyltoluene 23288-49-5, Probulcol 25013-16-5, Bha 27215-73-2, Flavanol  
(dietary flavonoids inhibition of .beta.-carotene-15,15'-dioxygenase activity in pig intestinal homogenates and Caco-2 cells)



- 129:38653 QSARs for the effect of benzaldehydes on **foodborne** bacteria and the role of sulfhydryl groups as targets of their antibacterial activity. Ramos-Nino, M. E.; Ramirez-Rodriguez, C. A.; Clifford, M. N.; Adams, M. R. (Food Safety Group, School of Biological Sciences, University of Surrey, Surrey, GU2 5XH, UK). Journal of Applied Microbiology, 84(2), 207-212 (English) 1998. CODEN: JAMIFK. ISSN: 1364-5072. Publisher: Blackwell Science Ltd..
- AB Quant. structure activity relationships (QSARs) were obtained describing the activity of a series of benzaldehydes against three different **foodborne** bacteria, *Listeria monocytogenes* F6861, serotype 4b, *Salmonella enteritidis*, phage type 4, P167807 and *Lactobacillus plantarum* INT.L11. MIC values at pH 6.2 and 35 .degree.C were obtained for 11 phenolic benzaldehydes to produce multiple linear regression and artificial neural network models. For each organism, the models contained a steric parameter Vw and an electronic-steric parameter for ortho substituents Es.degree.. The benzaldehydes did not require to partition to produce their effect, shown by the lack of a lipophilic parameter in the models. This strongly suggests that they act on the outside of the cells. Substitution ortho to the carbonyl group increased their antibacterial action. Cells were treated with 2,3-dihydroxy benzaldehyde and examd. for their ability to bind radiolabeled iodoacetate to envelope sulfhydryl groups that remained available. It was shown that the accumulation of radiolabeled iodoacetate was lower after treatment, indicating possible competition between these two compds. for the same target. The order of the sensitivity to benzaldehydes (*Salmonella* > *Listeria* > *Lactobacillus*) correlated with the no. of surface sulfhydryl groups available, being highest for *Salmonella*.
- IT 139-85-5  
(effect of benzaldehydes on **foodborne** bacteria and role of sulfhydryl groups as targets of their antibacterial activity)
- RN 139-85-5 HCA
- CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



- CC 10-5 (Microbial, Algal, and Fungal Biochemistry)
- ST benzaldehyde antibacterial **foodborne** bacteria
- IT Structure-activity relationship  
(bactericidal; effect of benzaldehydes on **foodborne** bacteria and role of sulfhydryl groups as targets of their antibacterial activity)
- IT *Lactobacillus plantarum*  
*Listeria monocytogenes*  
*Salmonella enteritidis*

## Sulfhydryl group

(effect of benzaldehydes on **foodborne** bacteria and role of sulfhydryl groups as targets of their antibacterial activity)

IT Bacteria (Eubacteria)

(**foodborne**; effect of benzaldehydes on **foodborne** bacteria and role of sulfhydryl groups as targets of their antibacterial activity)

IT 100-83-4 121-33-5 123-08-0 134-96-3 **139-85-5**  
148-53-8 487-70-7 1194-98-5 2144-08-3 24677-78-9  
26153-38-8

(effect of benzaldehydes on **foodborne** bacteria and role of sulfhydryl groups as targets of their antibacterial activity)

L22 ANSWER 4 OF 9 HCA COPYRIGHT 2003 ACS on STN

111:55732 Dual electrode electrochemical detector for HPLC.

Determination of phenolic compounds in distilled alcoholic **beverages**. Friedrich, O.; Sontag, G. (Inst. Anal. Chem., Univ. Vienna, Vienna, A-1090, Austria). Fresenius' Zeitschrift fuer Analytische Chemie, 334(1), 59-63 (English) 1989. CODEN: ZACFAU. ISSN: 0016-1152.

AB A method for detn. of phenolic compds. in distd. alc.

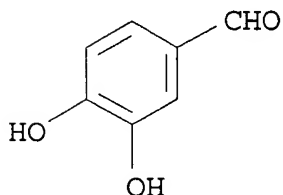
**beverages** has been developed. After sepn. by reversed phase chromatog., these compds. are detected coulometrically in a dual electrode detector. The hydrodynamic electrochem. behavior of the substances in oxidative and reductive mode was investigated. For quant. detn., phenolic compds. are oxidized at the first working electrode (+0.65 V); then the oxidn. products are reduced at the second working electrode (0.0 V). The current due to these processes is recorded. By the high selectivity of the detection mode matrix interferences can be eliminated in several alc. **beverages**. In this way qual. information is improved. The detection limits of phenolic acids and aldehydes are between 0.01 and 1 ng (S/N = 3).

IT **139-85-5**, 3,4-Dihydroxybenzaldehyde

(detn. of, in distd. alc. **beverages** by HPLC, dual electrode electrochem. detector for)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 16-1 (Fermentation and Bioindustrial Chemistry)

ST phenolic compd detn alc **beverage**; electrode phenolic compd; HPLC phenolic compd; liq chromatog phenolic compd

IT Phenols, analysis

(detn. of, in distd. alc. **beverages** by HPLC, dual

electrode electrochem. detector for)

IT Alcoholic **beverages**  
(bourbon, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT Alcoholic **beverages**  
(brandy, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT Alcoholic **beverages**  
(calvados, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT Alcoholic **beverages**  
(cognac, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT Alcoholic **beverages**  
(distd., phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT Aldehydes, analysis  
Carboxylic acids, analysis  
(phenolic, detn. of, in distd. alc. **beverages** by HPLC, dual electrode electrochem. detector for)

IT Alcoholic **beverages**  
(rum, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT Alcoholic **beverages**  
(whiskey, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, bourbon, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, brandy, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, calvados, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, cognac, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, distd., phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, rum, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

IT 64-17-5  
(alcoholic **beverages**, whiskey, phenolic compds. detn. in, by HPLC, dual electrode electrochem. detector for)

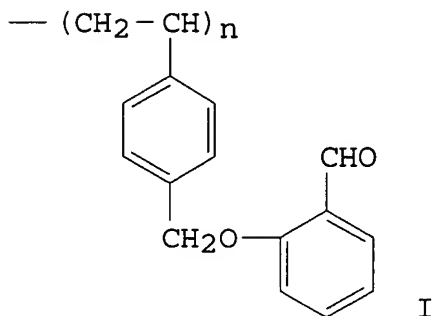
IT 99-50-3, 3,4-Dihydroxybenzoic acid 121-33-5, 4-Hydroxy-3-methoxybenzaldehyde 121-34-6, 4-Hydroxy-3-methoxybenzoic acid 134-96-3, 4-Hydroxy-3,5-dimethoxybenzaldehyde 139-85-5, 3,4-Dihydroxybenzaldehyde 530-57-4, 4-Hydroxy-3,5-dimethoxybenzoic acid

(detn. of, in distd. alc. **beverages** by HPLC, dual electrode electrochem. detector for)

L22 ANSWER 5 OF 9 HCA COPYRIGHT 2003 ACS on STN

109:55236 Preparation of polymers optionally containing tertiary amines as catalysts for racemization of amino acids. Mirviss, Stanley B. (Stauffer Chemical Co., USA). U.S. US 4713470 A 19871215, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1985-736724 19850522.

GI

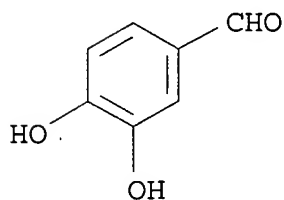


AB Reaction of chloroalkyl-substituted polymers with hydroxy arom. aldehydes gives a polymer (I; n = 100-1,000,000), useful as catalysts for racemization of amino acids. A suspension of chlormethylated Biobeads S-X1 (10% divinylbenzene, 4.25 CH<sub>2</sub>Cl meq/g) and salicylaldehyde K salt in dioxane and EtOH was refluxed for 18 h to give a resin, which (0.58 g) was refluxed with 25 mL a 5.8% soln. of Me D-phenylalaninate in toluene for 8-10 h to result in complete racemization without any peptization. The same result was obtained when the above racemization step was repeated with the addn. of 0.58 g of the Amberlyst IRA-35 resin. However, no racemization occurred if only the Amberlyst IRA-35 resin was used.

IT 139-85-5DP, 3,4-Dihydroxybenzaldehyde, reaction products with chloroalkylated resins (prepn. of, as catalyst for racemization of amino acids)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



IC ICM C07B057-00

NCL 560038000

CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1

IT **Food**

Pharmaceuticals

(racemization of amino acids for)

IT 90-02-8DP, Salicylaldehyde, reaction products with chloroalkylated resins 97-51-8DP, 5-Nitrosalicylaldehyde, reaction products with chloroalkylated resins **139-85-5DP**, 3,4-Dihydroxybenzaldehyde, reaction products with chloroalkylated resins 9033-99-2P 9040-03-3P 9080-67-5DP, Poly(vinylbenzyl chloride), cross-linked with divinylbenzene, reaction products with hydroxy arom. aldehydes 9080-67-5DP, Poly(vinylbenzyl chloride), reaction products with hydroxy arom. aldehydes 115172-20-8P (prep. of, as catalyst for racemization of amino acids)

L22 ANSWER 6 OF 9 HCA COPYRIGHT 2003 ACS on STN

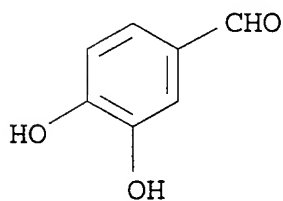
106:212458 Liquid chromatographic determination of phenolic aldehydes from distilled alcoholic **beverages**. Lehtonen, Pekka (Res. Lab., Alko Ltd., Helsinki, SF-00101, Finland). Foundation for Biotechnical and Industrial Fermentation Research, [Publication], 3(Flavour Res. Alcohol. Beverages), 121-30 (English) 1984. CODEN: FBIREN. ISSN: 0780-6655.

AB HPLC was used to det. phenolic aldehydes in alc. **beverages**. A Hewlett-Packard model 1090 chromatograph equipped with a HP 1040A diode array detector, HP 85B personal computer, HP 3392A integrator, and HP 9121 disk drive unit for data storage were used. Eight aldehydes were detd.: protocatechualdehyde [**139-85-5**], 4-hydroxybenzaldehyde [123-08-0], 3-hydroxybenzaldehyde [100-83-4], vanillin [121-33-5], syringaldehyde [134-96-3], coniferylaldehyde [458-36-6], sinapaldehyde [4206-58-0], and salicylaldehyde [90-02-8]. Chromatograms of these aldehydes in whiskey, cognac, and rum are presented.

IT **139-85-5**, Protocatechualdehyde  
(detn. of, in alc. **beverages** by HPLC)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 16-1 (Fermentation and Bioindustrial Chemistry)

ST phenol aldehyde detn alc **beverage** HPLC

IT Alcoholic **beverages**

(phenolic aldehydes detn. in, by HPLC)

IT Chromatography, column and liquid

(high-performance, of phenolic aldehydes, in alc. **beverages**)

IT Aldehydes, analysis

- (phenolic, detn. of, in alc. **beverages** by HPLC)
- IT 64-17-5  
(alcoholic **beverages**, phenolic aldehydes detn. in, by HPLC)
- IT 90-02-8, Salicylaldehyde, analysis 100-83-4, 3-Hydroxybenzaldehyde 121-33-5, Vanillin 123-08-0, 4-Hydroxybenzaldehyde 134-96-3, Syringaldehyde 139-85-5, Protocatechualdehyde 458-36-6, Coniferylaldehyde 4206-58-0, Sinapaldehyde  
(detn. of, in alc. **beverages** by HPLC)

L22 ANSWER 7 OF 9 HCA COPYRIGHT 2003 ACS on STN

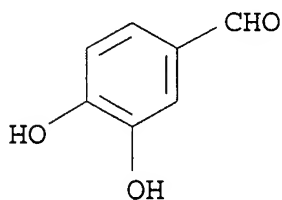
56:21693 Original Reference No. 56:4105f-i Polarometric determination of aromatic aldehydes with 2,4-dinitrophenylhydrazine. Berka, A.; Dolezal, J.; Janata, J.; Zyka, J. (Karlova Univ., Prague). Analytica Chimica Acta, 25, 379-85 (English) 1961. CODEN: ACACAM. ISSN: 0003-2670.

AB From 1.10 to 4.72 mg. of some aromatic aldehydes can be detd. by polarographic titration with 0.01M 2,4-dinitrophenylhydrazine (I) in 2N HCl. Method (A): To 0.01-0.03 millimole of aromatic aldehyde add 2.5 ml. concd. HCl and 6-7 ml. 0.05% aq. thymol (II), dil. to 15 ml. with H<sub>2</sub>O, bubble in N for 5 min., and titrate the soln. with 0.01M I. Stir the mixt. for 3 min. by bubbling N after addn. of each 0.2 ml. I until the current is stabilized. Titrate at -0.4 to -0.8 v. vs. a satd. calomel electrode, correcting the current, in .mu.amp., for the vol. of I added. With increasing I concn. the current increases linearly. Method (B): Dissolve 0.01-0.03 millimole aldehyde in a min. of 5 ml. EtOH, add 2.5 ml. concd. HCl, dil. to 15 ml. with H<sub>2</sub>O, and complete the detn. as above. Method (C): Dissolve 0.01-0.03 millimole sample in a min. vol. of EtOH, add 6-7 ml. 0.05% II and 2.5 ml. concd. HCl, dil. to 15 ml. with H<sub>2</sub>O, and finish the detn. as in (A). Results of 10 replicates of each of the detns. of vanillin (by A, B, or C), 3,4-EtO(HO)C<sub>6</sub>H<sub>3</sub>CHO (by A), o- and p-NO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CHO, cumene aldehyde, piperonal, cinnamaldehyde, and salicylaldehyde (by B), BzH and 3,4-(HO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>CHO (by C) have standard deviations of 0.50-1.45%. The NO<sub>2</sub> or C: C group of a compd. is polarographically reduced, giving a V-shaped titration curve.

IT 139-85-5, Protocatechualdehyde  
(detn. of)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 2 (Analytical Chemistry)

IT 104-55-2, Cinnamaldehyde

(detn. in food)

IT 57-13-6, Urea 90-02-8, Salicylaldehyde 100-52-7, Benzaldehyde  
120-57-0, Piperonal 121-32-4, Benzaldehyde, 3-ethoxy-4-hydroxy-  
121-33-5, Vanillin 122-03-2, Benzaldehyde, p-isopropyl-  
139-85-5, Protocatechualdehyde 552-89-6, Benzaldehyde,  
o-nitro- 555-16-8, Benzaldehyde, p-nitro-  
(detn. of)

L22 ANSWER 8 OF 9 HCA COPYRIGHT 2003 ACS on STN

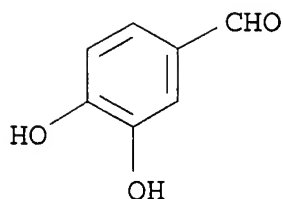
55:95149 Original Reference No. 55:17933f-i,17934a Food  
additives. V. Antioxidative effect of sulfur-containing fatty acids  
on vitamin A in fish-liver oil. Akagi, Masuo; Aoki, Isamu (Hokkaido  
Univ., Sapporo). Yakugaku Zasshi, 81, 492-5 (Unavailable) 1961.  
CODEN: YKKZAJ. ISSN: 0031-6903.

AB cf. CA 52, 6263b. The antioxidant action was examd. with 5  
3-(alkylthio)propionic acids, 9 of its oxidn. products, 5  
mercaptals, 4 thiol derivs. of  $\text{PrCO}_2\text{H}$ , and 6 .omega.-alkoxy derivs.  
of lower fatty acids, by using high-unit vitamin A cod liver oil as  
the substrate. For sake of comparison, the synergistic action of  
.alpha.-tocopherol was tested with com. Pr gallate and  
dihydronorguaiaretic acid. 3-Thiol derivs. of  $\text{EtCO}_2\text{H}$  had  
antioxidant effects against vitamin A but their oxidn. products were  
all ineffective, the activity descending in the order S, SO, and  
SO<sub>2</sub>. All the .omega.-alkoxy derivs. of lower fatty acids were  
ineffective, as were 4-thiol derivs. of  $\text{PrCO}_2\text{H}$ , although 3-thiol  
derivs. of  $\text{EtCO}_2\text{H}$  were effective. All mercaptal derivs. were  
effective, and .alpha.-tocopherol intensified the potency of  
samples. Antibacterial tests of these compds. showed them to be all  
ineffective. 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>SCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H (2.4 g.) in 10 ml. AcOH and  
4 ml. 30% H<sub>2</sub>O<sub>2</sub> heated 1 hr. on a H<sub>2</sub>O bath, cooled, poured in 300 ml.  
ice H<sub>2</sub>O, and kept overnight at 0.degree. gave 2.2 g.  
3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>SO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H, needles, m. 137-8.degree. (C<sub>6</sub>H<sub>6</sub>).  
3-(Octylthio)propionic acid (1.1 g.) in 25 ml. AcOH and 1.5 ml.  
concd. HCl treated dropwise with 0.5N bromide-bromate reagent, kept  
2 days at room temp., the product poured in 200 ml. ice H<sub>2</sub>O, the  
ppt. filtered, and washed with petr. ether gave 0.8 g.  
3-(octylsulfinyl)propionic acid, needles, m. 64-5.degree..  
2,4-MeO(HS)C<sub>6</sub>H<sub>3</sub>OH (12 g.) in 50 ml. toluene and 1.8 g. Na refluxed,  
cooled, 6.7 g. .gamma.-butyrolactone and 20 ml. toluene added, the  
toluene distd. off, the residue in 50 ml. EtOH treated with H<sub>2</sub>O,  
acidified with HCl, and kept at 0.degree. gave 4 g.  
3,4-MeO(HO)C<sub>6</sub>H<sub>3</sub>S(CH<sub>2</sub>)<sub>3</sub>CO<sub>2</sub>H, m. 77-8.degree. (ligroine).  
RSO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H were prepd. similarly (R, % yield, and m.p. given):  
Pr, 64, 193-4.degree.; Bu, 70, 95-6.degree.; heptyl, 90,  
127-8.degree. 4-HOC<sub>6</sub>H<sub>4</sub>, 69, 95-100.degree.; 4-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>, 88,  
184-5.degree.; 3,4-MeO(HO)C<sub>6</sub>H<sub>3</sub>, 86, 157-7.5.degree..

IT 139-85-5, Protocatechualdehyde  
(bis(carboxyalkyl) mercaptals, as antioxidants for vitamin A in  
fish-liver oil)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 12 (Foods)  
 IT Antioxidants  
     (2(and 3)-tert-butyl-4-methoxyphenol, for food)  
 IT **Food**  
     (antioxidants for)  
 IT 88-32-4, Phenol, 3-tert-butyl-4-methoxy- 121-00-6, Phenol,  
     2-tert-butyl-4-methoxy-  
     (as food antioxidant)  
 IT 139-85-5, Protocatechualdehyde  
     (bis(carboxyalkyl) mercaptals, as antioxidants for vitamin A in  
     fish-liver oil)

L22 ANSWER 9 OF 9 HCA COPYRIGHT 2003 ACS on STN

20:30105 Original Reference No. 20:3712g-i,3713a-b Chemical  
 constitution and preservative properties. Sabalitschka, Th.;  
 Dietrich, R. K. Desinfektion, 11, 67-71 (Unavailable) 1926.  
 AB The inhibiting effect on the growth of Penicillium glaucum spores  
 and mycelium, and partly also of Micrococcus candicans, Sarcina  
 flava, and B. coli was tested in a yeast ext.-peptone-agar medium.  
 The following were the inhibiting concns. (in %): aliphatic and  
 inorg. acids. HCO<sub>2</sub>H 0.036 increasing for AcOH and HCl, H<sub>2</sub>SO<sub>4</sub> and  
 maleic acid. The remaining acids examd. were ineffective in the  
 concns. used. BzOH derivs.-3,4-Cl(HO)C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>Me 0.036; BzOH, Me  
 anisate, m- and p-HOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me 0.071; anisic acid, p-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H  
 0.143; m-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, p-BrC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, m-HO<sub>3</sub>SC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H, cuminic and  
 salicylic acids 0.2140; acetylsalicylic acid, o-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H 0.286;  
 BzONa, 1.5; Na salicylate 4.3. Phenols. Phenol, thymol, carvacrol  
 0.014; Me cinnamate, Me phenacetin 0.071; pyrocatechol dimethyl  
 ether, .psi.-cumidine, phenylacetic acid 0.143; hydroquinole,  
 pyrogallol and phloroglucinol had no effect at 1.4%.  
 Protocatechualdehyde, mandelic and benzilic acids, cinnamyl and  
 eugenol are also remarkably ineffective. This is in harmony with  
 Pfeffer's observation that resorcinol is a source of C to  
 Aspergillus. This tendency of all phenols increases with the no. of  
 OH. Of the substances examd. the mono phenols are the most powerful  
 preservatives. The introduction of OH or CO<sub>2</sub>H into phenols or  
 carboxylic acids, and of SO<sub>3</sub>H and NH<sub>2</sub> into the latter has an  
 unfavorable effect, which may be explained by Schoeller and Heck's  
 theory of hydration centers. NH<sub>2</sub> increases the activity of cyclic  
 hydrocarbons; the effect of Cl depends on the compd. into which it  
 enters. The position of a substituent is also of importance. Salt  
 formation diminishes the preservative power of aromatic acids  
 considerably, while esterification (with exception of the liquid  
 salicylates), etherification of some phenols and the introduction of

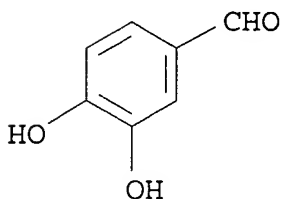


OEt into methylacetanilide have the opposite effect. This led to the expectation of an essential influence of the reaction of the medium on the activity of this group. The assumption was only partly confirmed by expt.: p-HOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H is inactive in alk. medium, while the slight activity of p-ClC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Na becomes marked in acid medium. On the other hand the min. active concns. of the following esters were the same in alk. and acid medium: p-HOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>Me (I) 0.36-0.37, Me anisate, 0.36-0.38, 3,4-Cl(HO)C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>Me 0.18-0.19. I, which is marketed as Solbrol and Nipagin, is recommended as a preservative for **foods**. Doses of 2 g. daily continued for 1 month had no untoward effects. Discoloration or turbidity of the medium does not occur.

IT 139-85-5, Protocatechualdehyde  
(as preservative)

RN 139-85-5 HCA

CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



CC 11C (Biological Chemistry: Bacteriology)

IT **Food**  
(preservatives for, chem. constitution and)

IT 50-78-2, Acetylsalicylic acid 64-18-6, Formic acid 64-19-7,  
Acetic acid 65-85-0, Benzoic acid 74-11-3, Benzoic acid,  
p-chloro- 89-83-8, Thymol 90-64-2, Mandelic acid 91-16-7,  
Veratrole 97-53-0, Eugenol 103-26-4, Cinnamic acid, methyl ester  
103-82-2, .alpha.-Toluic acid 108-95-2, Phenol 110-16-7, Maleic  
acid 118-91-2, Benzoic acid, o-chloro- 121-53-9, Benzoic acid,  
m-sulfo- 123-31-9, Hydroquinone 137-17-7, Pseudocumidine  
139-85-5, Protocatechualdehyde 499-75-2, Carvacrol  
535-80-8, Benzoic acid, m-chloro- 536-66-3, Cumic acid 586-76-5,  
Benzoic acid, p-bromo- 7647-01-0, Hydrochloric acid 7664-93-9,  
Sulfuric acid  
(as preservative)

=> d 121 1-25 ti

L21 ANSWER 1 OF 25 HCA COPYRIGHT 2003 ACS on STN

TI Cloning, sequence, and catalytic properties of multifunctional  
caffeic acid O-methyltransferase from strawberry fruit and use for  
enhancement of **flavor** and **taste** in plants

L21 ANSWER 2 OF 25 HCA COPYRIGHT 2003 ACS on STN

TI Influence of metallic content of fino sherry wine on its  
susceptibility to browning

- L21 ANSWER 3 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Solubility of some phenolic compounds contained in grape seeds, in supercritical carbon dioxide
- L21 ANSWER 4 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Peroxynitrite scavenging activities of aromatic compounds isolated from konnyaku, Amorphophallus konjac K.Koch.
- L21 ANSWER 5 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI **Aroma** Biosynthesis in Strawberry: S-Adenosylmethionine: Furaneol O-Methyltransferase Activity in Ripening Fruits
- L21 ANSWER 6 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavor** constituents in enzyme hydrolysates from shore swimming crab and spotted shrimp
- L21 ANSWER 7 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Formulations containing cranberry fruit, DL-methionine, and Chinese herbs
- L21 ANSWER 8 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI **Fragrance** composition containing 4-(1-menthoxymethyl)-2-phenyl-1,3-dioxolane or its derivatives
- L21 ANSWER 9 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Aromatic plants of French Polynesia. Vanilla from Tahiti
- L21 ANSWER 10 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Preparation of cinnamic acid derivatives as antioxidants for **food**
- L21 ANSWER 11 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI 4-(1-Menthoxymethyl)-2-phenyl-1,3-dioxolane or its derivatives and **flavor** composition containing them
- L21 ANSWER 12 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Quantitative structure activity relationship for the effect of benzoic acids, cinnamic acids and benzaldehydes on Listeria monocytogenes
- L21 ANSWER 13 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Phenolic compounds in dietary fiber fractions from **foods**
- L21 ANSWER 14 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI High-performance liquid chromatography of phenolic aldehydes with highly selective fluorimetric detection by means of postcolumn photochemical derivatization
- L21 ANSWER 15 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI A thin-layer chromatographic method for determining the authenticity of natural vanilla extracts

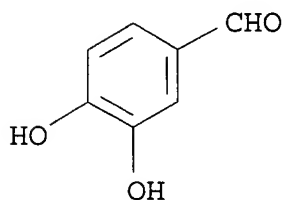
- L21 ANSWER 16 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Modified .beta.-adrenergic receptor and transgenic animals having the receptor
- L21 ANSWER 17 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Determination of coumarin as an adulterant in vanilla **flavoring** products by high-performance liquid chromatography
- L21 ANSWER 18 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI .beta.-Ketocarboxyl and phosphonate dihydrochalcone sweeteners
- L21 ANSWER 19 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Flavonone precursors for .alpha.-amino acid dihydrochalcones
- L21 ANSWER 20 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI 3,4-Dihydroxybenzaldehyde-D-glucoside, the irritant substance of Konnyaku
- L21 ANSWER 21 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Gas chromatographic-mass spectrometric study of phenols and diphenols in roast coffee of different varieties
- L21 ANSWER 22 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Diphenols and caramel compounds in roasted coffees of different varieties. II
- L21 ANSWER 23 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Vanilla and products with a vanilla **taste**. A new development system for thin-layer chromatograms
- L21 ANSWER 24 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI A substance having astringent **taste**, glycoside of 3,4-dihydroxybenzaldehyde in "hatomugi" (Coix lacryma-jobi Linne, var. ma-yuen stapf.)
- L21 ANSWER 25 OF 25 HCA COPYRIGHT 2003 ACS on STN  
TI Formation of the **perfume** of vanilla

=> d l21 10,11 cbib abs hitstr hitind

- L21 ANSWER 10 OF 25 HCA COPYRIGHT 2003 ACS on STN  
126:225107 Preparation of cinnamic acid derivatives as antioxidants for **food**. Shiihara, Isao (Shiihara Isao, Japan). Jpn. Kokai Tokkyo Koho JP 09031013 A2 19970204 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-183070 19950719.
- AB Cinnamic acid derivs. 3,4-(R1O)R2OC6H3CH:CHCO2H (R1-2 = H, lower alkyl), e.g. ferulic acid and caffeic acid, useful as antioxidants for **food** (no data), are prepd. by treatment of benzaldehydes 3,4-(R1O)R2OC6H3CHO with malonic acid or Ac2O in the presence of active silica gel. Vanillin was heated with Nipsil VN 3

at 81-83.degree. and the resulting slurry was further treated with vanillin and malonic acid at 135.degree., followed by hydrolysis of the resulting ferulic acid silanolate to give ferulic acid.

IT 139-85-5, 3,4-Dihydroxybenzaldehyde  
 (prepn. of cinnamic acid derivs. as antioxidants for food  
 from benzaldehydes with malonic acid or Ac2O using silica (gel))  
 RN 139-85-5 HCA  
 CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



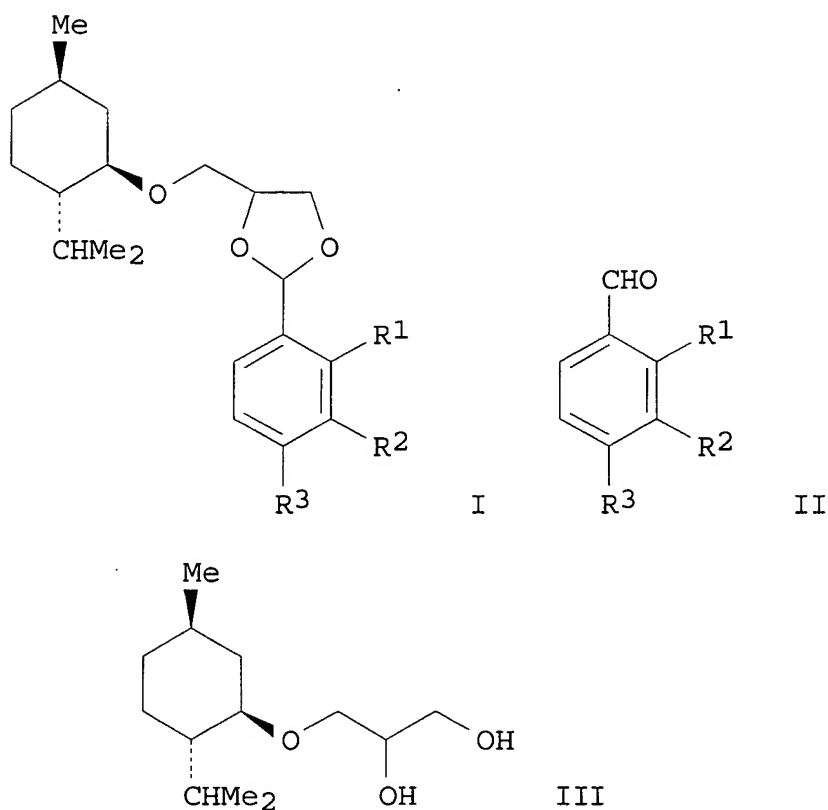
IC ICM C07C059-52  
 ICS B01J021-08; C07C051-02; C07C051-083; C07C051-353; C07C059-68;  
 C07B061-00  
 CC 25-17 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
 Section cross-reference(s): 17  
 ST cinnamic acid deriv prepn antioxidant; food antioxidant  
 cinnamic acid deriv; ferulic acid prepn antioxidant food;  
 caffeic acid prepn antioxidant food; vanillin condensation  
 malonic acid silica; catechualdehyde condensation malonic acid  
 silica; benzaldehyde carboxymethylenation silica gel catalyst  
 IT Food additives  
 (antioxidants; prepn. of cinnamic acid derivs. as antioxidants  
 for food from benzaldehydes with malonic acid or Ac2O  
 using silica (gel))  
 IT Antioxidants  
 (for food; prepn. of cinnamic acid derivs. as  
 antioxidants for food from benzaldehydes with malonic  
 acid or Ac2O using silica (gel))  
 IT Condensation reaction catalysts  
 Terra alba  
 (prepn. of cinnamic acid derivs. as antioxidants for food  
 from benzaldehydes with malonic acid or Ac2O using silica (gel))  
 IT Silica gel, uses  
 (prepn. of cinnamic acid derivs. as antioxidants for food  
 from benzaldehydes with malonic acid or Ac2O using silica (gel))  
 IT 7631-86-9, Nipsil VN 3, uses  
 (prepn. of cinnamic acid derivs. as antioxidants for food  
 from benzaldehydes with malonic acid or Ac2O using silica (gel))  
 IT 331-39-5P, Caffeic acid 1135-24-6P, Ferulic acid  
 (prepn. of cinnamic acid derivs. as antioxidants for food  
 from benzaldehydes with malonic acid or Ac2O using silica (gel))  
 IT 108-24-7, Acetic anhydride 121-33-5, Vanillin 139-85-5,  
 3,4-Dihydroxybenzaldehyde 141-82-2, Malonic acid, reactions  
 (prepn. of cinnamic acid derivs. as antioxidants for food  
 from benzaldehydes with malonic acid or Ac2O using silica (gel))

L21 ANSWER 11 OF 25 HCA COPYRIGHT 2003 ACS on STN

125:196055 4-(1-Menthoxymethyl)-2-phenyl-1,3-dioxolane or its derivatives and **flavor** composition containing them.

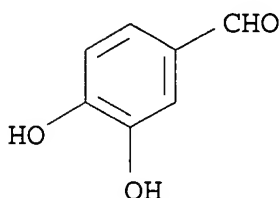
Nakatsu, Tetsuo; Green, Carter B.; Reitz, Gary A.; Kang, Raphael K. L. (Takasago International Corp., Japan; Takasago Institute for Interdisciplinary Science Inc.). U.S. US 5545424 A 19960813, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 1994-321976 19941012.

GI



AB 4-(1-Menthoxymethyl)-2-phenyl-1,3-dioxolane or a deriv. thereof represented by formula I, wherein R1 represents a hydrogen atom, a hydroxy group or a lower alkoxy group; R2 and R3, which may be the same or different, each represents a hydrogen atom, a hydroxy group, a lower alkoxy group, or, when taken together, R2 and R3 represent a methylene dioxy group; useful in **flavor** compns. Compds. I were prep'd. via acetalation of benzaldehyde derivs. II (R1 = R2 = R3 = H; R1 = H, R2 = OH, OMe, OEt, R3 = OH; R1 = OH, R2 = OMe, R3 = H; R1 = R2 = H, R3 = OMe; R1 = H, R2R3 = OCH2O) with 3-(menthyloxy)-1,2-propanediol (III). **Odor** and mouth

sensations of compds. I were detd.  
 IT 139-85-5, Protocatechuic aldehyde  
 ((Menthoxymethyl)phenyldioxolane or its derivs. and  
 flavor compn. contg. them)  
 RN 139-85-5 HCA  
 CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



IC ICM A23L001-22  
 NCL 426536000  
 CC 30-10 (Terpenes and Terpenoids)  
 Section cross-reference(s): 17, 25, 28, 62  
 ST menthoxymethylphenyldioxolane **flavorant** prepn; dioxolane  
 menthoxymethylaryl deriv **flavorant** prepn  
 IT **Flavoring** materials  
 Odor and Odorous substances  
 Olfaction  
 Taste  
 ((Menthoxymethyl)phenyldioxolane or its derivs. and  
 flavor compn. contg. them)  
 IT Confectionery  
 (candy, hard, (Menthoxymethyl)phenyldioxolane or its derivs. and  
 flavor compn. contg. them)  
 IT 180964-43-6P 180964-45-8P 180964-47-0P 180964-49-2P  
 180964-51-6P 180964-53-8P 180964-55-0P  
 ((Menthoxymethyl)phenyldioxolane or its derivs. and  
 flavor compn. contg. them)  
 IT 100-52-7, Benzaldehyde, reactions 120-57-0, Piperonal 121-32-4,  
 Ethyl vanillin 121-33-5, Vanillin 123-11-5, Anisaldehyde,  
 reactions 139-85-5, Protocatechuic aldehyde 148-53-8  
 87061-04-9, 3-(1-Methoxy)-1,2-propanediol  
 ((Menthoxymethyl)phenyldioxolane or its derivs. and  
 flavor compn. contg. them)

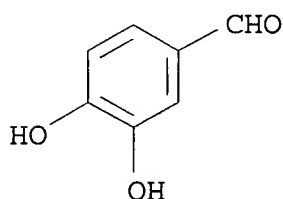
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FILE 'HCA' ENTERED AT 15:08:08 ON 11 SEP 2003  
 L56 8270 S DENTIFRIC?  
 L57 3403 S MOUTHWASH?  
 L58 2830 S CANDY OR CANDIES  
 L59 2875 S (CHEWING# OR CHEWABLE#) (2A) GUM#  
 L60 4 S L4 AND (L56 OR L57 OR L58 OR L59)  
 L61 65 S L5 AND (L56 OR L57 OR L58 OR L59)

L62 32 S L6 AND (L56 OR L57 OR L58 OR L59)  
 L63 1 S L60 NOT (L20 OR L21 OR L22)  
 L64 42 S L61 NOT (L41 OR L42 OR L43)  
 L65 18 S L62 NOT (L55 OR L52 OR L53)

=> d l63 1 cbib abs hitstr hitind

L63 ANSWER 1 OF 1 HCA COPYRIGHT 2003 ACS on STN  
 135:348763 **Dentifrices** containing antiseptics. Yoshimura,  
 Masanori; Tokumoto, Norifumi; Honma, Yoko; Ito, Satoshi (Lion Corp.,  
 Japan). Jpn. Kokai Tokkyo Koho JP 2001302475 A2 20011031, 11 pp.  
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-122798 20000424.  
 AB The title **dentifrices** comprise .gtoreq. 1 substances  
 selected from aldehydes, higher alcs., cycloalkanols, ketones, and  
 their analogs as disinfectants. A **dentifrice** contained  
 CaCO<sub>3</sub> 50, glycerin 20, carrageenan 0.5, CM cellulose 1,  
 lauryldiethanolamide 1, sucrose monolaurate 2, flavors 1, Na  
 saccharin 0.1, 2-methylresorcinol 0.1, distd. water balance q.s. to  
 100 %.  
 IT 139-85-5, 3,4-Dihydroxybenzaldehyde  
 (**dentifrices** contg. antiseptics)  
 RN 139-85-5 HCA  
 CN Benzaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16  
 CC 62-7 (Essential Oils and Cosmetics)  
 ST **dentifrice** antiseptic aldehyde higher alc ketone  
 IT Antibacterial agents  
     **Dentifrices**  
     Disinfectants  
     **Mouthwashes**  
     (**dentifrices** contg. antiseptics)  
 IT Alcohols, biological studies  
     Aldehydes, biological studies  
     Ketones, biological studies  
     (**dentifrices** contg. antiseptics)  
 IT 87-66-1, Pyrogallol 90-02-8, Salicylaldehyde, biological studies  
     95-01-2, 2,4-Dihydroxybenzaldehyde 98-01-1, Furfural, biological  
     studies 100-83-4 111-27-3, Hexanol, biological studies  
     112-30-1, Decanol 112-42-5, Undecanol 112-53-8, Dodecanol  
     120-80-9, Catechol, biological studies 120-92-3D, Cyclopentanone,  
     derivs. 123-08-0, p-Hydroxybenzaldehyde 137-03-1  
     139-85-5, 3,4-Dihydroxybenzaldehyde 143-08-8, Nonanol  
     150-76-5, p-Methoxyphenol 501-91-7, Junipal 502-61-4D,

Farnesene, derivs. 515-69-5, Bisabolol 562-74-3 608-25-3,  
2-Methylresorcinol 623-27-8, 1,4-Benzenedicarboxaldehyde  
626-19-7, Isophthalaldehyde 1461-04-7 1502-05-2, Cyclodecanol  
1502-06-3, Cyclodecanone 1724-39-6, Cyclododecanol 1963-36-6,  
p-Methoxycinnamic aldehyde 2433-14-9, 4-Cyclohexylcyclohexanol  
4674-50-4, Nootkatone 5349-51-9 5986-55-0, Patchouli alcohol  
6531-86-8, 2-Cyclohexylcyclohexanol 6728-26-3, trans-2-Hexenal  
6789-80-6, cis-3-Hexenal 6812-78-8, Rhodinol 8013-90-9, Ionone  
13074-65-2 14727-47-0, Isolongifolanone 18318-83-7,  
trans-2-Hexenal dimethylacetal 18871-14-2D, Jasmal, hydro derivs.  
29221-56-5, Decanone 35044-68-9 37677-14-8, Empetaal  
51547-44-5, Muscogene 51795-26-7 53175-87-4D, Cyclohexenyl,  
derivs. 53452-70-3, Undecanone 56011-02-0, Phenylethylisoamyl  
ether 67746-30-9, trans-2-Hexenal diethylacetal 69845-62-1,  
Undecenol 87376-12-3 125301-13-5, Tridecen-1-ol 370883-87-7  
(**dentifrices** contg. antiseptics)



=> d l41 1-18 cbib abs hitstr hitind

L41 ANSWER 1 OF 18 HCA COPYRIGHT 2003 ACS on STN

138:353101 Dough **composition** for cracker production and the baked cracker product. Ivanov, V. N.; Afanas'eva, G. A. (Otkrytoe Aktsionernoe Obshchestvo "Akkond", Russia). Russ. RU 2194392 C2 20021220, No pp. given (Russian). CODEN: RUXXE7. APPLICATION: RU 2000-117536 20000703.

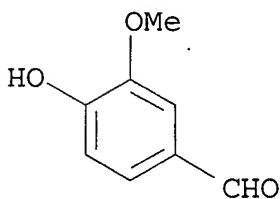
AB Dough for a cracker product contains flour, salt, baking soda, fat product, starch, sugar, ammonium, invert syrup, dry milk, sodium pyrosulfite and **essence**. Addnl. additives are lecithin and vanillin. As a fat component, the compn. comprises soybean oil, and lemon **essence** as an **essence** at the following ratio of components, wt.%: sodium pyrosulfite 0.01-0.03, sodium bicarbonate 0.07-0.09, table salt 0.49, vanillin 0.03-0.05, lemon **essence** 0.01-0.03, maize starch 4.14-5.0, soybean oil 10.01-12.0, lecithin 0.19-0.25, dry milk 4.27-5.8, granulated sugar 13.5-14.0, invert syrup 2.0-2.5, ammonium salt 1.2-1.5 and high-grade wheat flour the balance. The baked cracker product is less friable than usual products and can be made in the form of a flat complicated geometric figure with contours reminding one of an animal.

IT 121-33-5, Vanillin

(dough compn. for cracker prodn. and the baked cracker product)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A21D013-08

CC 17-11 (Food and Feed Chemistry)

IT Alkalinity

Dough

**Food** functional properties

**Food** texture

Water binding (**food**)

Wheat flour

(dough compn. for cracker prodn. and the baked cracker product)

IT Lemon (Citrus limon)

(**essence**; dough compn. for cracker prodn. and the baked cracker product)

IT **Essences**

(lemon; dough compn. for cracker prodn. and the baked cracker product)

IT 57-50-1, Sucrose, biological studies 121-33-5, Vanillin

144-55-8, Sodium bicarbonate, biological studies 7647-14-5, Sodium

chloride, biological studies 7664-41-7D, Ammonia, salts  
 7681-57-4, Sodium pyrosulfite  
 (dough compn. for cracker prodn. and the baked cracker product)

L41 ANSWER 2 OF 18 HCA COPYRIGHT 2003 ACS on STN

137:37652 Warming **compositions** containing benzaldehydes for  
**food** and drink or for oral care **formulations**.

Kumamoto, Hiroyasu; Kitamura, Tatsuo (Takasago International  
 Corporation, Japan). Eur. Pat. Appl. EP 1215258 A2 20020619, 13 pp.  
 DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,  
 LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR.  
 (English). CODEN: EPXXDW. APPLICATION: EP 2001-403207 20011212.  
 PRIORITY: JP 2000-376814 20001212.

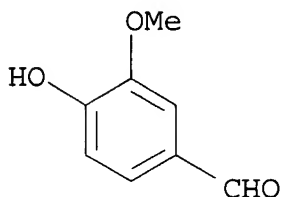
AB This invention relates to a warming compn. for **food** and  
 drink or for oral care prepns. which produce an excellent and  
 long-lasting warming effect and cause no or little irritation to  
 mucous membranes. A **flavor** compn. for **food** and  
 drink or for oral care prepns. comprising **beverages** or  
 oral care prepns. is also disclosed. Thus, a candy formulation  
 contained vanillin 0.005, CA-10 0.005, granulated sugar 52.3, starch  
 syrup 46.6, citric acid 1, and **flavor** 0.09%. The candy  
 produced a warming effect in the the throat.

IT 121-33-5, Vanillin

(warming compns. contg. benzaldehydes for **food** and  
 drink or for oral care formulations)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM C09K005-00

ICS A23L001-30; A61K007-00

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 17, 62

ST warming compn **food** drink; benzaldehyde oral care

IT **Beverages**

Candy

Chewing gum

Dentifrices

**Flavor**

**Food**

Human

Mouthwashes

(warming compns. contg. benzaldehydes for **food** and  
 drink or for oral care formulations)

IT 121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5,

Vanillin 139-85-5, 3,4-Dihydroxybenzaldehyde 82654-98-6,  
Vanillyl butyl ether 195863-84-4, TPG 1 207792-35-6, CA 10  
(warming compns. contg. benzaldehydes for **food** and  
drink or for oral care formulations)

L41 ANSWER 3 OF 18 HCA COPYRIGHT 2003 ACS on STN

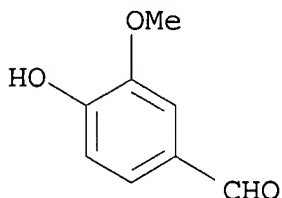
135:241289 Vodka **formulated** with sugar syrup, Yantavit  
**food** additive, and vanillin. Mishanin, A. V.; Burachevskii,  
I. I.; Vorob'eva, E. V. (Obshchestvo s Ogranichennoi  
Otvetstvennost'yu "Tai Speis", Russia). Russ. RU 2146284 C1  
20000310, No pp. given (Russian). CODEN: RUXXE7.  
APPLICATION: RU 1999-114322 19990708.

AB Vodka is formulated to contain (per 1000 daL of prepd. product)  
0.01-0.05 kg Yantavit **food** additive; 17.0-17.5 L 65.8%  
sugar syrup; 0.09-0.11 L (1:100) vanillin; plus Lux rectified  
ethanol and potable water adjusted to a strength of 40%. The vodka  
preserves its **aroma** in storage. The vodka prevents alc.  
syndrome after its using, normalizes acidic alk. reaction in  
intestine and increases general strengthening action of man's  
organism.

IT 121-33-5, Vanillin  
(vodka formulated with sugar syrup, Yantavit **food**  
additive, and vanillin)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM C12G003-06

ICS A23L001-30

CC 17-13 (Food and Feed Chemistry)

IT **Food** additives

Syrups (sweetening agents)

(vodka formulated with sugar syrup, Yantavit **food**  
additive, and vanillin)

IT **Alcoholic beverages**

(vodka; vodka formulated with sugar syrup, Yantavit **food**  
additive, and vanillin)

IT 64-17-5, Ethanol, biological studies 121-33-5, Vanillin  
360771-07-9, Yantavit

(vodka formulated with sugar syrup, Yantavit **food**  
additive, and vanillin)

L41 ANSWER 4 OF 18 HCA COPYRIGHT 2003 ACS on STN

135:106659 **Flavoring** included in amylose-amylopectin

**mixtures**. Shchetkina, N. I. (Russia). Russ. RU 2146478 C1

20000320, No pp. given (Russian). CODEN: RUXXE7.

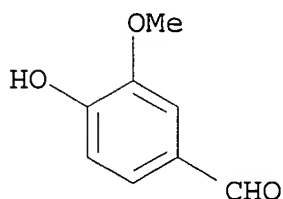
APPLICATION: RU 1999-109963 19990518.

AB An org. **flavoring** substance (or a mixt. of **flavors**) is dissolved in an alkanediol; the resulting soln. is mixed with finely dispersed sugars and a mixt. of natural linear and branched polysaccharides is introduced. Clathrates with included **flavor** are produced. The products are characterized by increased stability and reduced volatility of the **flavor** constituent. Thus, vanillin is dissolved in trimethylene glycol, sucrose is added, and subsequently a mixt. of amylose and amylopectin is introduced.

IT 121-33-5, Vanillin  
(**flavoring** included in amylose-amylopectin mixts.)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A23L001-226

ICS A23L001-22

CC 17-6 (Food and Feed Chemistry)

ST **flavor** amylose amylopectin clathrate

IT **Flavor**

**Flavoring** materials

**Food** additives

(**flavoring** included in amylose-amylopectin mixts.)

IT Carbohydrates, biological studies

Clathrates

Glycols, biological studies

Polysaccharides, biological studies

(**flavoring** included in amylose-amylopectin mixts.)

IT 57-50-1, Sucrose, biological studies 121-33-5, Vanillin

504-63-2, Trimethylene glycol 9005-82-7, Amylose 9037-22-3,

Amylopectin

(**flavoring** included in amylose-amylopectin mixts.)

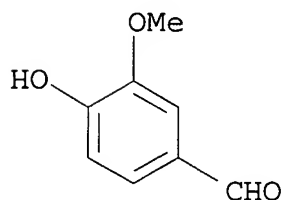
L41 ANSWER 5 OF 18 HCA COPYRIGHT 2003 ACS on STN

135:45546 Velikii Knyaz Vladimirsii vodka **formulated** with vanillin and lactose. Listova, Z. A.; Vorob'eva, E. V.; Tsurikov, Yu. S.; Zhukova, E. V.; Beketova, V. A. (Otkrytoe Aktsionernoe Obshchestvo "Vladalko", Russia). Russ. RU 2144948 C1  
20000127, No pp. given (Russian). CODEN: RUXXE7.  
APPLICATION: RU 1998-102629 19980206.

AB Vodka is formulated to contain 65.8% sugar syrup, vanillin (1:100), a lactose soln. and a water-ethanol mixt. The combination of vanillin and lactose gives a vodka with mild **taste** and

delicate **flavor**. Thus, a vodka may contain sucrose syrup 8, vanillin 0.05, and lactose soln. 0.2 L/1000 daL, plus water and ethanol.

IT 121-33-5, Vanillin  
(vodka formulated with vanillin and lactose)  
RN 121-33-5 HCA  
CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM C12G003-06  
CC 17-13 (Food and Feed Chemistry)  
IT Alcoholic **beverages**  
(vodka; vanillin- and lactose-contg.)  
IT 63-42-3, Lactose 121-33-5, Vanillin  
(vodka formulated with vanillin and lactose)

L41 ANSWER 6 OF 18 HCA COPYRIGHT 2003 ACS on STN

132:11820 Method for preparing reed stem and watermelon seed **composite** protein health drink. Yang, Xuezhong; Guan, Zhongbo (Peop. Rep. China). Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1170540 A 19980121, 5 pp. (Chinese). CODEN: CNXXEV. APPLICATION: CN 1997-102719 19970322.

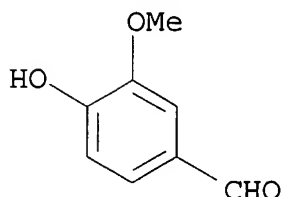
AB The health drink is composed of reed stem (20), watermelon seed (2-20), and winter snow (30), soybean protein (1-3), compd. emulsifier (0.1-0.2), sodium citrate (0.025), sodium CMC (0.05), sodium triphosphate (0.025%), crystal sugar (6), aspartame (0.08), vanillin (0.02), ethylmaltol (0.002), water (20-59%). Tender reed stem is processed by harvesting, drying, cutting, cleaning, extg. with snow water twice, centrifuging together with ultrafiltrating to get sterile ext. The snow is collected at cold winter, melted it at 10.degree. then filtrated and ultrafiltrated, after degasing by vacuum, stored in stainless steel canister. The watermelon seed composite protein process comprises cleaning the seed by washing, getting the seed kernel, grinding at 80.degree. to get the defibrinated soln., filtrating the soln. at 180 mesh, adjusting water contg. lower than 80%, adding 3% NaCl, salting out for 15 min, heating to 140.degree. by high pressure steam, deodorizing by vacuum, cooling to 75.degree.. The final product process comprises mixing the reed stem ext., watermelon seed composite protein, soybean protein powder at 90-100.degree., adding edulcorant, **flavorer**, excipient, emulsifier, stabilizer, chelant, thickener according the compn. ratio, homogenizing at 70.degree., 13-19 MPa, sterilizing and packing.

IT 121-33-5, Vanillin  
(method for prepg. reed stem and watermelon seed composite

protein health drink)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A23L002-38

ICS A61K035-78

CC 17-10 (Food and Feed Chemistry)

Section cross-reference(s): 18

IT **Beverages**

(health; method for prepg. reed stem and watermelon seed composite protein health drink)

IT 68-04-2, Sodium citrate 121-33-5, Vanillin 4940-11-8,  
 Ethylmaltol 7758-29-4, Sodium triphosphate 9004-32-4,  
 Carboxymethylcellulose sodium salt 22839-47-0, Aspartame  
 (method for prepg. reed stem and watermelon seed composite protein health drink)

L41 ANSWER 7 OF 18 HCA COPYRIGHT 2003 ACS on STN

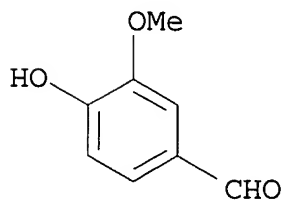
131:242345 Stable suspension of a particulate component in **food formulation**. Vogensen, Bent Kvist; Thygesen, Hanne Valsted; Soe, Jorn Borch (Danisco A/S, Den.). PCT Int. Appl. WO 9948377 A1 19990930, 54 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-IB467 19990308. PRIORITY: GB 1998-5945 19980320.

AB A compn. suitable for spreads, mayonnaise, etc., comprises (a) an oil and(or) an oil mimetic component; (b) a triglyceride fatty acid and(or) a high m.p. emulsifier component; (c) a particulate component; wherein the particulate component (c) is in a stable suspension within a crystal matrix formed by component (b); with the proviso that the particulate component (c) does not form a crystal matrix. Thus, a vanillin **flavoring** suitable for the manuf. of pound cake is produced by using an oil phase contg. 99 parts soybean oil and 1% fully hardened palm oil, and combining the oil phase with powd. vanillin in the ratio 80:20.

IT 121-33-5, Vanillin

(stable suspension of particulate component in **food formulation**)

RN 121-33-5 HCA  
 CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A23D009-00  
 ICS A21D002-14; A23D007-015; A23L001-24; A21D008-04  
 CC 17-9 (Food and Feed Chemistry)  
 ST food particulate suspension oil emulsifier; spread  
 food particulate suspension; mayonnaise food  
 particulate suspension; vanilla flavor food  
 particulate suspension  
 IT Glycerides, biological studies  
 (C8-21 and C8-21-unsatd. mono- and diglycerides, acetates,  
 Grindsted Acetem 95; stable suspension of particulate component  
 in food formulation)  
 IT Cooking  
 (baking; stable suspension of particulate component in  
 food formulation)  
 IT Bakery products  
 (cakes; stable suspension of particulate component in  
 food formulation)  
 IT Monoglycerides  
 (soya, hydrogenated; stable suspension of particulate component  
 in food formulation)  
 IT Food  
 (spreads; stable suspension of particulate component in  
 food formulation)  
 IT Dispersing agents  
 Emulsifying agents  
 Feed  
 Food  
 Food emulsions  
 Margarine  
 Mayonnaise  
 Suspensions  
 (stable suspension of particulate component in food  
 formulation)  
 IT Enzymes, biological studies  
 Fat substitutes  
 Fats and Glyceridic oils, biological studies  
 Glycerides, biological studies  
 Monoglycerides  
 Palm oil  
 Rape oil  
 Soybean oil

Sunflower oil

(stable suspension of particulate component in food formulation)

IT 121-33-5, Vanillin 9005-25-8, Starch, biological studies  
 9005-38-3, Sodium alginate 26658-19-5, Grindsted STS 30  
 109767-97-7, Dimodan OT 113355-72-9, Panodan AB 100 113355-73-0,  
 Panodan AM 135375-08-5, Panodan TR 154907-67-2, Grindamyl S 100  
 225111-79-5, Grindsted LFS 560 225112-95-8, Grindsted Citrem LR 10  
 244129-03-1, Grindsted FF 1102 244129-51-9, Grindsted PS 209  
 244129-64-4, Grindsted FF 1109 244162-20-7, Grindamyl 9201  
 244162-25-2, Grindamyl H 121 244162-26-3, Grindamyl 757  
 (stable suspension of particulate component in food formulation)

L41 ANSWER 8 OF 18 HCA COPYRIGHT 2003 ACS on STN

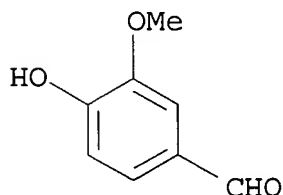
130:3284 Confectionery compositions. Bealin-Kelly, Francis Joseph David  
 (The Procter & Gamble Company, USA). PCT Int. Appl. WO 9847483 A1  
 19981029, 16 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB,  
 BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM,  
 GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
 LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
 SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG,  
 KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE,  
 DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE,  
 SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-IB557  
 19980414. PRIORITY: GB 1997-7979 19970421.

AB The invention relates to throat drops, suitable for the relief of  
 cough and cold like symptoms, comprising a **cooling** compn.  
 and a **warming** compn. in distinct and discrete regions  
 thereof, the **cooling** and **warming** compns. being  
 adapted to provide sequential release profiles. The sequential  
 release of the **warming** and **cooling** agents  
 provides an enhanced **warming** or **cooling** effect.

IT 121-33-5, Vanillin  
 (confectionery compns. for cold and cough relief)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K009-00

CC 17-6 (Food and Feed Chemistry)  
 Section cross-reference(s): 63

IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-50-1, Sucrose,  
 biological studies 64-17-5, Ethanol, biological studies 67-63-0,  
 Isopropyl alcohol, biological studies 67-66-3, Chloroform,



biological studies 77-92-9, Citric acid, biological studies  
 89-78-1, Menthol 97-53-0, Eugenol 99-82-1D, p-Menthane,  
 N-substituted 3-carboxamides 100-51-6, Benzyl alcohol, biological  
 studies 104-55-2, Cinnamic aldehyde 121-33-5, Vanillin  
 122-48-5, Zingerone 123-51-3, Isoamyl alcohol 404-86-4,  
 Capsaicin 555-66-8, Shogaol 1196-92-5 5533-03-9, Vanillyl  
 alcohol methyl ether 13184-86-6 14193-29-4 19408-84-5,  
 Dihydrocapsaicin 20279-06-5, Homodihydrocapsaicin 27113-22-0,  
 Paradol 28789-35-7, Nordihydrocapsaicin 58253-27-3, Gingerol  
 58493-48-4, Homocapsaicin 81995-38-2 81995-39-3 81995-41-7  
 81995-42-8 82654-98-6 207792-35-6 215590-83-3, David Michael  
 Heat

(confectionery compns. for cold and cough relief)

L41 ANSWER 9 OF 18 HCA COPYRIGHT 2003 ACS on STN

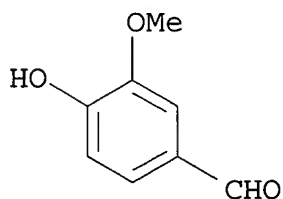
126:190944 Oral or topical **warming** compounds comprising  
 phosphate derivatives. Kupper, Philip Lloyd (The Procter and Gamble  
 Company, USA). PCT Int. Appl. WO 9702273 A1 19970123, 19 pp.  
 DESIGNATED STATES: W: AU, BR, CA, CN, JP, MX, NO, SG, TR; RW: AT,  
 BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE.  
 (English). CODEN: PIXXD2. APPLICATION: WO 1996-US10194 19960612.  
 PRIORITY: US 1995-498103 19950705.

AB Oral or topical compns. useful in providing a perceived sensation of  
**warmth** comprise phosphate derivs. and a pharmaceutically  
 acceptable carrier. A cough syrup contained dextromethorphan  
 hydrobromide 0.1326, guaifenesin 1.3263, granular sugar 54.1280,  
 Tween 80 0.0199, glycerin 1.9999, propylene glycol 17.9100, sodium  
 citrate 0.5194, citric acid anhyd. 0.3363, potassium sorbate 0.0995,  
 and vanillyl alc. Bu ether monophosphate (prepn. given) q.s. 100%.

IT 121-33-5, Vanillin  
 (oral or topical **warming** compds. comprising phosphate  
 derivs.)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM C07F009-12

ICS A61K007-16; A61K009-20; A61K009-48; C07F009-24; C07F009-18

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 79

ST oral topical **warming** compd phosphate deriv; cough syrup  
 vanillyl butyl ether phosphate

IT Natural products, pharmaceutical

(Senna; oral or topical **warming** compds. comprising  
 phosphate derivs.)

- IT Drug delivery systems  
(capsules; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Drugs  
(gastrointestinal; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Capsicum annuum annuum  
(longum group; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Drug delivery systems  
(lozenges; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Fats and Glyceridic oils, biological studies  
(mustard; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Resins  
(oleoresins; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Analgesics
  - Anise
  - Antihistamines
  - Antitussives
  - Capsicum frutescens
  - Chimaphila
  - Clove (Syzygium aromaticum)
  - Coolants**
  - Decongestants
  - Expectorants
  - Flavoring materials**
  - Ginger
  - Horseradish (Armoracia lapathifolia)
  - Influenza
  - Pepper (**spice**)
  - Peppermint (Mentha piperita)
  - Spearmint (Mentha spicata)
  - Sweetening agents  
(oral or topical **warming** compds. comprising phosphate derivs.)
- IT Essential oils  
(oral or topical **warming** compds. comprising phosphate derivs.)
- IT Birch (Betula)  
(sweet; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Drug delivery systems  
(syrups; oral or topical **warming** compds. comprising phosphate derivs.)
- IT Capsicum  
(tincture; oral or topical **warming** compds. comprising phosphate derivs.)
- IT 187595-47-7 187595-48-8  
(oral or topical **warming** compds. comprising phosphate

- derivs.)
- IT 187595-46-6P  
(oral or topical **warming** compds. comprising phosphate derivs.)
- IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-06-7, Allyl isothiocyanate 59-67-6, Niacin, biological studies 60-29-7, Ether, biological studies 64-17-5, Ethyl alcohol, biological studies 67-66-3, Chloroform, biological studies 100-51-6, Benzyl alcohol, biological studies 104-55-2 119-36-8, Methyl salicylate 122-48-5, Zingerone 123-51-3 138-86-3, Limonene 141-78-6, Ethyl acetate, biological studies 404-86-4, Capsaicin 555-66-8, Shogaol 1490-04-6, Menthol 5533-03-9, Vanillyl alcohol methyl ether 13184-86-6 14193-29-4 19408-84-5, Dihydrocapsaicin 20279-06-5, Homodihydrocapsaicin 27113-22-0, Paradol 28789-35-7, Nordihydrocapsaicin 58253-27-3, Gingerol 58493-48-4, Homocapsaicin 70150-56-0 81995-38-2 81995-39-3 81995-41-7 81995-42-8  
(oral or topical **warming** compds. comprising phosphate derivs.)
- IT 10025-87-3, Phosphoric trichloride 82654-98-6  
(oral or topical **warming** compds. comprising phosphate derivs.)
- IT 57-50-1, Sucrose, biological studies 60-12-8, Benzeneethanol 69-65-8, Mannitol 78-70-6 89-80-5, Menthone 89-83-8, Thymol 93-14-1, Guaifenesin 97-53-0, Eugenol 100-52-7, Benzaldehyde, biological studies 103-90-2, Acetaminophen 104-45-0, Dihydroanethole 104-46-1, Anethole 105-54-4, Ethylbutyrate 113-92-8, Chlorpheniramine maleate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 123-92-2, Isoamyl acetate 125-69-9, Dextromethorphan hydrobromide 127-41-3, .alpha.-Ionone 128-44-9, Sodium saccharin 140-67-0, Estragole 147-24-0, Diphenhydramine hydrochloride 154-41-6, Phenylpropanolamine hydrochloride 345-78-8, Pseudoephedrine hydrochloride 470-82-6, Eucalyptol 550-70-9, Triprolidine hydrochloride 562-10-7 1009-11-6 4422-70-2 4940-11-8, Ethyl maltol 6485-40-1, L-Carvone 15687-27-1, Ibuprofen 22204-53-1, Naproxen 22839-47-0, Aspartame 39711-79-0, n-Ethyl-p-menthane-3-carboxamide 51115-67-4 53956-04-0, Monoammonium glycyrrhizate 55589-62-3, Acesulfame k 87061-04-9, 3-1-Menthoxypropane 1,2-diol  
(oral or topical **warming** compds. comprising phosphate derivs.)

L41 ANSWER 10 OF 18 HCA COPYRIGHT 2003 ACS on STN

126:101839 Biological delignification of plant components by the white rot fungi *Ceriporiopsis subvermispora* and *Cyathus stercoreus*. Akin, D. E.; Morrison, W. H. III; Rigsby, L. L.; Gamble, G. R.; Sethuraman, A.; Eriksson, K.-E. L. (Richard B. Russell Research Center, Agricultural Research Service, US Department of Agriculture, P.O. Box 5677, Athens, GA, 30604-5677, USA). Animal Feed Science and Technology, 63(1-4), 305-321 (English) 1996. CODEN: AFSTDH. ISSN: 0377-8401. Publisher: Elsevier.

AB Lignocelluloses from diverse plant types were treated with the white

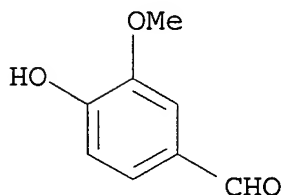
rot fungi *Ceriporiopsis subvermispora* (strains CZ-3-8497 and FP-90031-sp) and *Cyathus stercoreus*. Sources of lignocellulose included: the **warm-season** grasses sorghum (leaf blades, sheaths, and stems), pearl millet, napiergrass, and maize (stems); the **cool-season** grass wheat (leaf blades, sheaths, and stems); the legumes alfalfa (stems) and lespedeza (leaflets and stems). Fungus-treated residues were compared with untreated, control samples and with plants treated with a non-delignifying isolate of *Trichoderma*. Residues were evaluated for improved biodegradability by ruminal microorganisms and modifications in cell wall chem. by NMR, gas chromatog., and UV absorption microspectrophotometry. Specific plant-fungus interactions were identified that resulted in selective removal of lignin and improved biodegradability by white rot fungi but not the *Trichoderma* sp. All white rot fungi removed ester-linked p-coumaric and ferulic acids from grass stems, and this phenomenon appeared to account for the significant redn. in arom. components and improved biodegradability of fungus-treated grass lignocellulose. Cell walls in alfalfa stems were more resistant to biol. delignification than those in grasses, with only *C. stercoreus* removing significant amts. of aroms. and improving biodegradability. All white rot fungi improved the biodegradability of tannin-rich lespedeza samples.

IT 121-33-5, Vanillin

(of plant components delignified by *Ceriporiopsis subvermispora* and *Cyathus stercoreus*)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



CC 11-5 (Plant Biochemistry)

IT 121-33-5, Vanillin 134-96-3, Syringaldehyde 530-57-4, Syringic acid 881-68-5, Acetovanillin 1135-24-6, Ferulic acid 2478-38-8, Acetosyringone 7400-08-0, p-Coumaric acid (of plant components delignified by *Ceriporiopsis subvermispora* and *Cyathus stercoreus*)

L41 ANSWER 11 OF 18 HCA COPYRIGHT 2003 ACS on STN

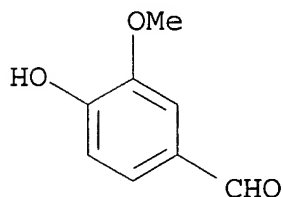
125:56856 **Flavoring compositions** containing .alpha.-keto acids and method of utilization. Van den Ouweland, Godefridus; Benzi, Francois; Van Beem, Nicole; Vanrietvelde, Claude (Firmenich S. A., Switz.). PCT Int. Appl. WO 9610927 A1 19960418, 74 pp. DESIGNATED STATES: W: AU, BR, CA, CN, JP, MX; US; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (French). CODEN: PIXXD2. APPLICATION: WO 1995-IB837 19951005. PRIORITY: CH 1994-3019 19941007.

AB .alpha.-Keto acids and certain precursors and derivs. thereof, particularly glyoxylic acid, 2-oxopropanoic acid, 2-oxobutanoic acid, 3-methyl-2-oxobutanoic acid, 3-methyl-2-oxopentanoic acid, 4-methyl-2-oxopentanoic acid, 3-hydroxy-2-oxopropanoic acid, oxalacetic acid, 2-oxoglutaric acid, 2-oxo-3-phenylpropanoic acid, 3-(4-hydroxyphenyl)-2-oxopropanoic acid, 2-oxo-1H-indole-3-propanoic acid, 2-oxo-1H-imidazole-4-propanoic acid, 4-methylthio-2-oxobutanoic acid, 3-mercapto-2-oxopropanoic acid, 3-hydroxy-2-oxobutanoic acid, 6-amino-2-oxohexanoic acid and 5-guanido-2-oxopentanoic acid, and precursors and derivs. thereof that are capable of being formed from or releasing said acids in the use medium, are useful as **flavoring** ingredients. These ingredients are useful for prepg. **flavoring** compns. and a wide variety of **flavored foods** to which they impart greater creaminess and bulkiness so that they have a heightened effect in the mouth and generally an enhanced mouthfeel. They are also useful for enhancing the sweetness of **foods** sweetened with natural or artificial sweeteners, and giving it a more natural character. Thus, 2-oxobutanoic acid or 3-methyl-2-oxobutanoic acid may be incorporated in butter-type **flavors** at 0.3 ppm.

IT 121-33-5, Vanillin  
(**flavoring** compns. contg. .alpha.-keto acids)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A23L001-226  
ICS A23L001-227; A23L001-228

CC 17-6 (Food and Feed Chemistry)

ST keto acid **flavoring** material

IT **Flavoring** materials  
(celery; **flavoring** compns. contg. .alpha.-keto acids)

IT **Flavoring** materials  
(cereal; **flavoring** compns. contg. .alpha.-keto acids)

IT **Flavoring** materials  
(contg. .alpha.-keto acids)

IT Alcoholic **beverages**  
Beer  
**Beverages**  
Caramel (color)  
**Food**  
Fruit and vegetable juices  
Margarine  
Orange juice

Pharmaceutical dosage forms  
Sweetening agents  
Vanilla  
    (**flavoring** compns. contg. .alpha.-keto acids)  
IT Amino acids, biological studies  
    (**flavoring** compns. contg. .alpha.-keto acids)  
IT Sweetness  
    (**flavoring** compns. contg. .alpha.-keto acids effect on)  
IT **Flavoring** materials  
    (honey; **flavoring** compns. contg. .alpha.-keto acids)  
IT Coffee products  
Tea products  
    (**beverages**, **flavoring** compns. contg.  
    .alpha.-keto acids)  
IT **Flavoring** materials  
    (black currant, **flavoring** compns. contg. .alpha.-keto  
    acids)  
IT Soups  
    (bouillons, **flavoring** compns. contg. .alpha.-keto  
    acids)  
IT **Flavoring** materials  
    (butter, **flavoring** compns. contg. .alpha.-keto acids)  
IT Cheese  
    (cantadou, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Flavoring** materials  
    (cheese, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Flavoring** materials  
    (chicken, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Beverages**  
    **Flavoring** materials  
        (chocolate, **flavoring** compns. contg. .alpha.-keto  
        acids)  
IT **Flavoring** materials  
    (coffee, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Beverages**  
    (cola, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Food**  
    (desserts, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Beverages**  
    (lemonade, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Flavoring** materials  
    (meat, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Flavoring** materials  
    (milk, **flavoring** compns. contg. .alpha.-keto acids)  
IT **Beverages**  
    (orange, **flavoring** compns. contg. .alpha.-keto acids)  
IT Carboxylic acids, biological studies  
    (oxo, **flavoring** compns. contg. .alpha.-keto acids)  
IT Carboxylic acids, biological studies  
    (oxo, esters, **flavoring** compns. contg. .alpha.-keto  
    acids)  
IT **Flavoring** materials

(raspberry, **flavoring** compns. contg. .alpha.-keto acids)

IT **Flavoring** materials

(tomato, **flavoring** compns. contg. .alpha.-keto acids)

IT **Flavoring** materials

(vegetable, **flavoring** compns. contg. .alpha.-keto acids)

IT 52-90-4, Cysteine, biological studies 56-40-6, Glycine, biological studies 56-41-7, .alpha.-Alanine, biological studies 56-45-1, Serine, biological studies 56-84-8, Aspartic acid, biological studies 56-85-9, Glutamine, biological studies 56-86-0, Glutamic acid, biological studies 56-87-1, Lysine, biological studies 56-89-3, Cystine, biological studies 60-18-4, Tyrosine, biological studies 61-90-5, Leucine, biological studies 63-68-3, Methionine, biological studies 63-91-2, Phenylalanine, biological studies 70-47-3, Asparagine, biological studies 71-00-1, Histidine, biological studies 72-18-4, Valine, biological studies 72-19-5, Threonine, biological studies 73-22-3, Tryptophan, biological studies 73-32-5, Isoleucine, biological studies 74-79-3, Arginine, biological studies 121-33-5, Vanillin 127-17-3, 2-Oxopropanoic acid, biological studies 156-06-9, 2-Oxo-3-phenylpropanoic acid 298-12-4, Glyoxylic acid 327-57-1, Norleucine 328-42-7, Oxalacetic acid 328-50-7, 2-Oxoglutaric acid 372-75-8, Citrulline 392-12-1 583-92-6, 4-Methylthio-2-oxobutanoic acid 600-18-0, 2-Oxobutanoic acid 759-05-7, 3-Methyl-2-oxobutanoic acid 816-66-0, 4-Methyl-2-oxopentanoic acid 1113-60-6 1460-34-0, 3-Methyl-2-oxopentanoic acid 1944-42-9 2464-23-5 2504-83-8 2835-81-6, 2-Aminobutanoic acid 3081-61-6, Theanine 3715-10-4 6600-40-4, Norvaline 10606-14-1, 6-Amino-2-oxohexanoic acid 16804-57-2, .gamma.-Methyleneglutamic acid 62024-30-0  
(**flavoring** compns. contg. .alpha.-keto acids)

L41 ANSWER 12 OF 18 HCA COPYRIGHT 2003 ACS on STN

104:185186 Treating vegetable foods for animals and

**fragrance compositions** for this use. Baines,

David Allan; Davies, Ian William; Hatton, Roy (A.B.M. Chemicals Ltd., UK). Eur. Pat. Appl. EP 174821 A2 19860319, 21 pp.

DESIGNATED STATES: R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE.

(English). CODEN: EPXXDW. APPLICATION: EP 1985-306381 19850909.

PRIORITY: GB 1984-23153 19840913.

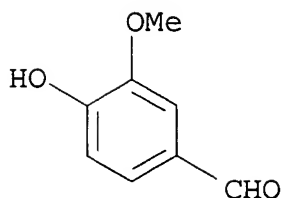
AB Vegetable feeds, e.g. silage, are treated with C6-8 aliph. compds. exhibiting green note **aromas** to improve acceptability of the feed material to livestock. Thus, a compn. contg. hexanal 1.2, cis-3-hexen-1-ol 37.3, 1-octen-3-ol 1.3, and .beta.-ionone 60.2% was mixed (at 25%) with propane-1,2-diol 74.4, thaumatin 0.05, colorant 0.01, and emulsifier (Tween 80) 0.5%, dild. 50-fold with water, and sprayed on silage to make it more **palatable** to sheep.

IT 121-33-5

(in **aroma** compns., for vegetable feeds for livestock)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)

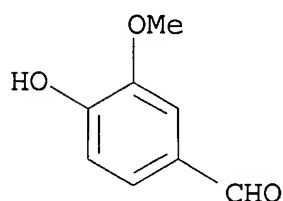


- IC ICM A23K001-16  
ICS A23K003-03; A61K007-46; C11B009-00
- CC 17-12 (Food and Feed Chemistry)  
Section cross-reference(s): 18
- ST **flavorant** plant feed livestock; **aroma** compn feed livestock; silage **aroma** compn; straw **aroma** compn
- IT **Flavoring** materials  
(aliph. compds., for vegetable feeds for livestock)
- IT **Odor** and **Odorous** substances  
(aliph. compds., in **aroma** compns. for vegetable feeds for livestock)
- IT Grass  
Hay  
Silage  
Straw  
(**aroma** compn. for, aliph. compds. in, livestock appetite in relation to)
- IT Cattle  
Sheep  
(vegetable feeds **palatability** increase for, with aliph. **aroma** compds.)
- IT Feed  
(vegetable, aliph. compd.-based **aroma** compns. for)
- IT Animal  
(livestock, vegetable feeds **palatability** increase for, with aliph. **aroma** compds.)
- IT 66-25-1 71-36-3, biological studies 71-41-0, biological studies  
79-77-6 98-01-1, biological studies 104-46-1 104-61-0  
108-64-5 110-19-0 110-43-0 111-27-3, biological studies  
112-72-1 121-33-5 123-51-3 123-92-2 659-70-1  
928-95-0 928-96-1 3391-86-4 3777-69-3 4466-24-4 5392-40-5  
5989-27-5  
(in **aroma** compns., for vegetable feeds for livestock)
- L41 ANSWER 13 OF 18 HCA COPYRIGHT 2003 ACS on STN
- 94:101653 Strawberry **flavor compositions**.  
Strasburger, Louis J.; Kratz, Philip D. (International Flavors and Fragrances Inc., USA). U. S. Reissue US 30363 19800805, 4 pp. Reissue of U.S. 3,499,769. (English). CODEN: UUXXA2.  
APPLICATION: US 1976-683353 19760505.
- AB Strawberry **flavor** is prepd. by oxidizing 2-methyl-2-pentenal [623-36-9] in the presence of Ag<sub>2</sub>O and NaOH to form 2-methyl-2-pentenoic acid [3142-72-1] and adding this compd.



to various other **flavorants** and carriers. The synthetic **flavor** mixt. is suitable for use in a variety of **foods**. Thus, 2-methyl-2-pentenoic acid 4.77 (prepd. from 2-methyl-2-pentenal oxidn.), geraniol [106-24-1] 1.00, ethyl methyl phenyl glycidate [77-83-8] 3.33, vanillin [121-33-5] 5.66, ethyl pelargonate [123-29-5] 13.06, isoamyl acetate [123-92-2] 14.00, and ethyl butyrate [105-54-4] 58.18 are mixed, dissolved in 4 vol. propylene glycol, and added to hard candy mixt. at 1.5 oz/100 lb. The candy made with 2-methyl-2-pentenoic acid had an excellent strawberry **flavor**, whereas candy made without this compd. had an inferior **flavor**.

IT 121-33-5  
(in strawberry **flavoring** material manuf.)  
RN 121-33-5 HCA  
CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC A23L001-235  
NCL 426534000  
CC 17-2 (Foods)  
ST strawberry **flavoring** material compn; methylpentenoate  
strawberry **flavorant**  
IT Confectionery  
(candy, strawberry **flavoring** material for)  
IT **Flavoring** materials  
(strawberry, methylpentenoic acid in)  
IT 77-83-8 105-54-4 106-24-1 106-27-4 121-33-5  
123-29-5 123-92-2 141-78-6, biological studies 621-82-9,  
biological studies 75440-80-1  
(in strawberry **flavoring** material manuf.)  
IT 11113-88-5  
(methylpentenal oxidn. in presence of, 2-methyl-2-pentenoic acid  
formation from, in strawberry **flavoring** material  
manuf.)  
IT 623-36-9  
(oxidn. of, 2-methyl-2-pentenoic acid formation from, in  
strawberry **flavoring** material manuf.)  
IT 3142-72-1  
(strawberry **flavoring** material enhancement by)

L41 ANSWER 14 OF 18 HCA COPYRIGHT 2003 ACS on STN  
88:134026 Intranasal trigeminal stimulation from **odorous**  
volatiles: Psychometric responses from anosmic and normal humans.  
Doty, Richard L.; Brugger, William E.; Jurs, Peter C.; Orndorff,  
Michael A.; Snyder, Peter J.; Lowry, L. Dale (Monell Chem. Senses

Cent., Univ. Pennsylvania, Philadelphia, PA, USA). Physiology & Behavior, 20(2), 175-85 (English) 1978. CODEN: PHBHA4. ISSN: 0031-9384.

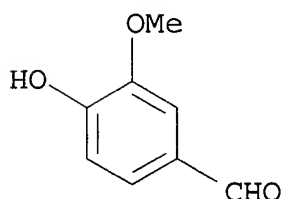
AB Psychometric ratings of the perceived intensity, pleasantness, **coolness**, **warmth**, and presumptive safety of high concns. of nasally-inhaled chems. commonly used in **olfactory** research were established for 3 groups of human observers: (1) anosmics lacking **olfactory** but not trigeminal nerve function; (2) normals asked to rate only intranasal trigeminal sensations (trigeminal focus group); and (3) normals asked to rate the overall **odor** experience in the traditional fashion. Forty-five of the 47 compds were detected by at least some proportion of the anosmics in a forced-choice test. Although differences in the rated intensities of the stimuli were present between the 3 exptl. groups, the relative rankings of the intensity responses were quite similar. The pleasantness and presumed safety of the chems. varied inversely with the perceived intensity in all 3 groups. The use of 11 to 13 readily-available and computer-derived mol. descriptors in linear learning machine pattern recognition analyses sep'd. the stimuli correctly into 4 discrete intensity classes. A multiple linear regression equation based upon such mol. descriptors proved successful in predicting the perceived trigeminal intensities of 12 chem. stimuli similar in general structure to members of the original stimulus set. These results emphasize the importance of trigeminal input in human nasal chemoreception and support the notion that the perceived intensities of nasally-inhaled stimulants can be math. predicted from relatively simple physicochem. and mol. structural parameters.

IT 121-33-5

(**olfaction** of, trigeminal nerves in)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



CC 13-13 (Mammalian Biochemistry)

ST **olfaction** trigeminal nerve

IT Molecular structure-biological activity relationship  
(trigeminal nerve-stimulating, of volatile compds.,  
**olfaction** in relation to)

IT **Olfaction**

(trigeminal nerves in)

IT Nerve

(trigeminal, in **olfaction**)

IT 50-78-2 60-12-8 64-17-5, biological studies 67-56-1,  
biological studies 67-64-1, biological studies 71-36-3,

biological studies 75-65-0, biological studies 75-98-9 76-22-2  
 78-70-6 78-93-3, biological studies 79-09-4, biological studies  
 79-31-2 90-05-1 91-64-5 97-53-0 97-61-0 98-01-1,  
 biological studies 98-55-5 100-41-4, biological studies  
 100-52-7, biological studies 104-46-1 105-57-7 106-24-1  
 106-42-3, biological studies 107-29-9 107-92-6, biological  
 studies 108-88-3, biological studies 108-94-1, biological  
 studies 109-52-4, biological studies 109-60-4 110-43-0  
 110-86-1, biological studies 111-14-8 111-65-9, biological  
 studies 111-66-0 111-70-6 111-84-2 111-87-5, biological  
 studies 119-36-8 120-72-9, biological studies 121-33-5  
 123-54-6, biological studies 123-86-4 123-92-2 124-07-2,  
 biological studies 138-86-3 140-11-4 141-78-6, biological  
 studies 142-62-1, biological studies 142-82-5, biological  
 studies 142-96-1 149-57-5 334-48-5 503-74-2 628-63-7  
 646-07-1 1490-04-6 5392-40-5 14901-07-6  
 (olfaction of, trigeminal nerves in)

L41 ANSWER 15 OF 18 HCA COPYRIGHT 2003 ACS on STN

81:62397 Stabilization of trans-diethyl-stilbestrol. Ludwig, Nelson H.;  
 White, William A. (Lilly, Eli, and Co.). U.S. US 3808338 19740430,  
 10 pp. (English). CODEN: USXXAM. APPLICATION: US 1971-175347  
 19710826.

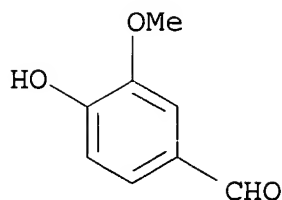
AB Diethylstilbestrol, .alpha.,.alpha.'-diethyl-4,4'-stilbenediol  
 (DES), which isomerizes from the active trans form to the inactive  
 cis form in animal feed formulations, can be inhibited from  
 isomerizing by adding to the formulation a mixt. consisting of a  
 compd. chosen from a defined class of aldehydes, ketones, and  
 aldehydic reducing sugars and a base such as an amine, a diamine, or  
 a quaternary salt. Thus, liq. premixes for addn. to animal feed  
 formulations are prepd. by **warming** the solvent to  
 50.degree., adding the isomerization-inhibiting compds. and  
 stirring, adding the trans-DES and stirring, and then allowing to  
**cool**. For the prepn. of 20 g DES/lb of liq. premix, the  
 following are used: propylene glycol 424, acetone 5, ethanolamine 5,  
 and trans-DES 20 g. A dry premix may be prepd. by applying the  
 above liq. premix to a dry carrier in a suitable mixer. Thus, to  
 prep. a 2 g/lb dry premix, 45 g of the above liq. premix is applied  
 to 409 g of soybean meal. Concs. of stabilized trans-DES mixts. may  
 also be prepd., 1 of which contains trans-DES 60, cyclohexanone 20,  
 and ethanolamine 20%; the ingredients are mixed in a paste-type  
 mixer and ground to a smooth slurry in a colloid mill or  
 homogenizer. Data are given showing the effectiveness of the  
 isomerization-inhibiting method and compds. used.

IT 121-33-5

(feed premix, for trans-diethylstilbestrol stabilization)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



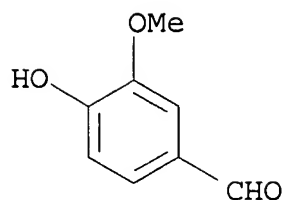
IC A61K  
 NCL 424346000  
 CC 17-2 (Foods)  
 IT 50-99-7, biological studies 58-86-6, biological studies 63-42-3  
 67-64-1, biological studies 70-11-1 78-93-3, biological studies  
 78-98-8 89-82-7 96-22-0 98-01-1, biological studies  
 102-71-6, biological studies 106-23-0 107-15-3, biological  
 studies 108-91-8 108-94-1, biological studies 109-89-7,  
 biological studies 110-13-4 111-42-2, biological studies  
 111-86-4 112-12-9 120-92-3 121-33-5 121-44-8,  
 biological studies 123-76-2 124-19-6 124-22-1 126-81-8  
 127-09-3 127-41-3 134-81-6 141-43-5, biological studies  
 141-79-7 144-55-8, biological studies 431-03-8 451-40-1  
 471-34-1, biological studies 497-19-8, biological studies  
 520-45-6 533-75-5 555-16-8 606-23-5 615-13-4 631-61-8  
 830-13-7 1305-62-0 1333-73-9 1336-21-6 1484-50-0 3128-06-1  
 5392-40-5 7558-79-4 13952-84-6  
 (feed premix, for trans-diethylstilbestrol stabilization)

L41 ANSWER 16 OF 18 HCA COPYRIGHT 2003 ACS on STN  
 78:109541 Pyrazine **flavoring compositions**. Flament,  
 Ivon (Firmenich et Cie). Fr. Demande FR 2128744 19721124,  
 26 pp. (French). CODEN: FRXXBL. APPLICATION: FR 1972-8076  
 19720308.

AB The compn. for **flavoring** or aromatizing foods,  
 pharmaceuticals, or tobacco contains a pyrazine deriv. which may be  
 pyrazine itself or pyrazine substituted in the 2, 3, 5, and (or) 6  
 position. The compn. also contains cyclohexenone derivs., e.g.,  
 5-ethyl-cyclo-hexene-2-one, 6-ethyl-cyclohexene-2-one, and  
 2-substituted thiazolidines, preferred substituents being alkyl,  
 alkoxy, and aryl residues. The **flavoring** compns. are  
 added in amts. of .apprx.0.1-10 ppm. Preferably, the compns. contain  
 more than one compd. of each group of substances.

IT 121-33-5  
 (food **flavoring** with)

RN 121-33-5 HCA  
 CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC A23L; C07C; C07D  
 CC 17-2 (Foods)  
 Section cross-reference(s): 63  
 ST pyrazine **flavoring food** pharmaceutical  
 IT **Flavoring** materials  
 (pyrazines, for **food** and pharmaceuticals)  
 IT 10178-65-1 13925-03-6 18433-98-2  
 (**flavoring** material)  
 IT 64-19-7, biological studies 75-18-3 78-84-2 96-17-3 98-00-0  
 107-92-6, biological studies 108-50-9 109-08-0 116-53-0  
 120-72-9 **121-33-5** 123-32-0 124-07-2, biological  
 studies 142-62-1, biological studies 290-37-9 334-48-5  
 590-86-3 696-70-8 930-68-7 1121-18-2 1122-20-9 1123-09-7  
 1124-11-4 1193-18-6 2379-55-7 3508-83-6 4177-16-6  
 5515-76-4 5515-77-5 5715-25-3 5780-66-5 5910-89-4  
 6303-75-9 6344-72-5 6610-21-5 6784-62-9 7214-50-8  
 7251-61-8 10132-38-4 10132-39-5 10132-41-9 10132-43-1  
 10132-45-3 10132-46-4 10463-42-0 13067-27-1 13238-84-1  
 13360-64-0 13360-65-1 13708-12-8 13925-00-3 13925-05-8  
 13925-06-9 13925-07-0 13925-08-1 13925-09-2 14667-55-1  
 14845-35-3 15329-10-9 15707-23-0 15707-24-1 15707-34-3  
 15986-80-8 15986-81-9 15987-00-5 15987-02-7 15987-03-8  
 17299-34-2 17398-16-2 18138-03-9 18138-04-0 18138-05-1  
 18433-97-1 18450-01-6 18903-30-5 18940-74-4 19550-43-7  
 22047-25-2 24050-09-7 24050-10-0 24050-11-1 24050-16-6  
 24541-72-8 24541-74-0 24541-75-1 25058-19-9 25058-20-2  
 25058-21-3 29444-46-0 29460-90-0 29460-91-1 29460-92-2  
 29460-93-3 29461-03-8 29461-04-9 29461-05-0 29461-07-2  
 29461-08-3 29750-44-5 30188-50-2 30590-92-2 31863-60-2  
 32184-46-6 32184-48-8 32184-50-2 32262-93-4 32262-98-9  
 32350-16-6 32736-91-7 32736-92-8 32741-11-0 37920-99-3  
 38028-71-6 38028-76-1 38346-91-7 38713-41-6 40122-96-1  
 40790-14-5 40790-15-6 40790-18-9 40790-19-0 40790-20-3  
 40790-21-4 40790-22-5 40790-23-6 40790-25-8 40790-26-9  
 40790-27-0 40790-28-1 40790-29-2 40790-33-8 40790-42-9  
 40790-43-0 40790-46-3 40790-56-5 40790-65-6 40790-69-0  
 40790-74-7 40790-75-8 40790-76-9 40790-77-0 40790-78-1  
 40823-56-1 41204-65-3  
 (**food flavoring** with)

L41 ANSWER 17 OF 18 HCA COPYRIGHT 2003 ACS on STN  
 77:7639 **Flavored** sugar. Gerhardt, Ulrich (Mueller, Karl, und  
 Co.). Ger. DE 1692376 19720203, 3 pp. (German). CODEN: GWXXAW.

APPLICATION: DE 1967-M74612 19670703.

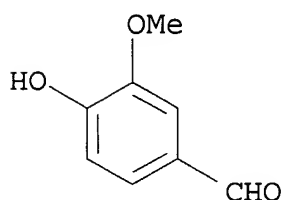
AB Vanillin [121-33-5] (3.75 kg) is added to 1 kg glycerol monostearate [1319-95-5] at 80.deg., and the **warm** soln. is mixed with 25 kg sucrose [57-50-1], **cooled**, and mixed with 225 kg sucrose to prep. a **flavored** sugar that retains all of the vanillin during >3 months in storage.

IT 121-33-5

(**flavoring** materials, contg. monostearate, for sucrose)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC A23L

CC 44-2 (Industrial Carbohydrates)

Section cross-reference(s): 17

ST sucrose vanillin **flavor**; glycerol monostearate sucrose **flavor**; shelf life vanillin sucrose

IT 57-50-1, uses and miscellaneous

(**flavoring** materials for, vanillin contg. monostearins)

IT 121-33-5

(**flavoring** materials, contg. monostearate, for sucrose)

IT 31566-31-1

(**flavoring** materials, contg. vanillin, for sucrose)

L41 ANSWER 18 OF 18 HCA COPYRIGHT 2003 ACS on STN

38:25916 Original Reference No. 38:3780c-d Coniferin from the cambium layer of fir. Solntsev, A. A. Lesnaya Prom. (No. 10/11), 16-17 (Unavailable) 1943.

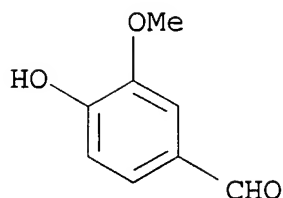
AB To obtain coniferin, express the juice from the soft cambium tissue, boil to coagulate the proteins, filter, concentrate the filtrate to about 1/5 its vol. and **cool**. Coniferin crystallizes in white crystals. Best results are obtained if the juice is collected in the period starting with the renewal of the vegetative period to the middle of August. To obtain vanillin, dissolve 10 g. of coniferin in hot H<sub>2</sub>O add a **warm** mixt. of H<sub>2</sub>SO<sub>4</sub> 15, H<sub>2</sub>O 80 and K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> 10 g., boil for approx. 3 hrs., and ext. with ether or preferably with benzene.

IT 121-33-5, Vanillin

(from coniferin of fir)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)

IT 121-33-5, Vanillin  
(from coniferin of fir)

=> d 142 1-18 ti

L42 ANSWER 1 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Preparation of monofluoroalkenes via direct olefin formation from carbonyl compounds and metalated fluoro-heterocyclic sulfones.

L42 ANSWER 2 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Regeneration of carbonyl compounds from their nitro-phenylhydrazones. II

L42 ANSWER 3 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI The lignans of fir wood

L42 ANSWER 4 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Solid derivatives of aldehydes. II. A specific reagent for aldehydes, 1,2-bis(p-chlorobenzylamino)ethane

L42 ANSWER 5 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Chemistry of vanillin and its derivatives. VII. Synthesis of DL-codamine, DL-pseudocodamine, and related 1-benzylisoquinolines

L42 ANSWER 6 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Molecular rearrangements. VI. The dehydration of cis- and of trans-2-phenylcyclohexanol

L42 ANSWER 7 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Reactions of vanillin and its derived compounds. XXIII. The synthesis of 4,4'-dihydroxy-3,3'-dimethoxybenzophenone

L42 ANSWER 8 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Applications of radioactive isotopes in the investigation of lignin.  
V

L42 ANSWER 9 OF 18 HCA COPYRIGHT 2003 ACS on STN

TI Reactions of vanillin and its derived compounds. XXII. Ethers of protocatechuic acid and their ethyl esters

L42 ANSWER 10 OF 18 HCA COPYRIGHT 2003 ACS on STN

- TI The procedure for the preparation of vanillin from eugenol by oxidation with nitrobenzene
- L42 ANSWER 11 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Identification of carbonyl compounds through conversion into hydantoins
- L42 ANSWER 12 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Catalytic hydrogenation of vanillin. Vanillylcreosol
- L42 ANSWER 13 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Extraction and determination of vanillin in chocolate and cacao butter
- L42 ANSWER 14 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Vanillin
- L42 ANSWER 15 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI A vanillin-barbituric indicator
- L42 ANSWER 16 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Estimation of vanillin in vanilla pods and vanilla sugar
- L42 ANSWER 17 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Estimation of vanillin in vanilla pods and vanilla sugar
- L42 ANSWER 18 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Colorimetric determination of vanillin, in vanilla

=> d l43 1-26 ti

- L43 ANSWER 1 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Oral compositions for improved **dental** cleansing effects by physicochemical actions
- L43 ANSWER 2 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Taste-improved dentifrices containing potassium nitrate
- ~ L43 ANSWER 3 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Method, flavoring materials, and dentifrices for enhancement of salivary secretion
- L43 ANSWER 4 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI **Oral hygiene** compositions which mask the burn sensation and the astringency of eucalyptol and zinc
- L43 ANSWER 5 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Disinfecting and deodorizing liquid **toothpastes**
- L43 ANSWER 6 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Refreshing **oral hygienic** liquids





- L43 ANSWER 7 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Improved personal care formulations containing amphiphilic phospholipid carriers for topical mucosal applications
- L43 ANSWER 8 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Application of solubility parameter theory to dentin-bonding systems and adhesive strength correlations
- L43 ANSWER 9 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Flavor systems for **oral care** products
- L43 ANSWER 10 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Antiplaque, antigingivitis oral compositions containing phosphates and copper sources
- L43 ANSWER 11 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Antiplaque, antigingivitis oral compositions containing phosphates and copper sources
- L43 ANSWER 12 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Diphosphonic acid esters as tartar control agents
- L43 ANSWER 13 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Pyrolysis/gas chromatography/ion-trap mass spectrometry of the '**tooth brush**' tree (*Salvadora persica* L.)
- L43 ANSWER 14 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Dentifrices containing organic acids and flavors
- L43 ANSWER 15 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI **Toothpastes** containing a flavor that changes to a different flavor during **tooth brushing**
- L43 ANSWER 16 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Bonding of restorative resins to dentine promoted by aqueous mixtures of aldehydes and active monomers
- L43 ANSWER 17 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Adhesion promoting agent, and its use on collagenous material
- L43 ANSWER 18 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI The stability of eugenol and anisaldehyde in tooth pastes
- L43 ANSWER 19 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Flavoring with 2-methoxy-4-(2-methylpropenyl)phenyl ester of isobutyric acid
- L43 ANSWER 20 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Bactericidal compositions containing peroxide and peroxidase for gingival and periodontal diseases

- L43 ANSWER 21 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Bactericide for **dental** disease containing a peroxide, peroxidase and a donor molecule.
- L43 ANSWER 22 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Use of isomeric farnesene product-by-process for augmenting or enhancing the aroma or taste of foodstuffs, chewing gums, medicinal products and **toothpastes**
- L43 ANSWER 23 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Use of 1,3,5,5,-tetramethyl-2-2-oxabicyclo[2.2.2.]octane in augmenting or enhancing the aroma or taste of foods
- L43 ANSWER 24 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Use of benzodionones in augmenting or enhancing the aroma and taste of a food
- L43 ANSWER 25 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Chewing gum and other orally usable products containing a flavor composition
- L43 ANSWER 26 OF 26 HCA COPYRIGHT 2003 ACS on STN  
TI Effect on hamster caries of purine derivatives, vanillin, and some tannin-containing materials

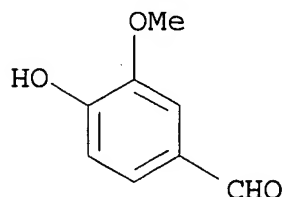
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- L43 ANSWER 1 OF 26 HCA COPYRIGHT 2003 ACS on STN  
139:154607 Oral compositions for improved **dental** cleansing effects by physicochemical actions. Eshita, Yoshiyuki (Kao Corporation, Japan). U.S. Pat. Appl. Publ. US 2003152524 A1 20030814, 7 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-309144 20021204. PRIORITY: JP 2001-369635 20011204; JP 2002-299694 20021011.
- AB An oral compn. comprises water and a cyclic carbonate compd. in a certain ratio. In this case, the ratio of the water and the cyclic carbonate compd. is such that when the water and the cyclic carbonate compd. are mixed together the mixt. goes into a 2-phase state. Moreover, the oral compn. may further comprise a polyol, and in this case the ratio of the water, the cyclic carbonate compd. and the polyol is such that when the water, the cyclic carbonate compd. and the polyol are mixed together the mixt. goes into a 2-phase state. The oral compn. has an excellent effect of removing accumulations on **dental** surfaces or between teeth through a physico-chem. action, rather than relying purely on a mech. action. For example, a **toothpaste** contained silica 10, titania 0.5, hydroxyethyl cellulose 1, Na lauryl sulfate 1, 70 % sorbitol 50, polyethylene glycol 5, Na saccharin 0.2, flavors 1, Na malate 1, propylene carbonate 9, ethylene carbonate 2, and ion-exchanged water 20.3 %.
- IT 121-33-5, Vanillin

(dentifrice compns. contg. carbonates and other actives for improved antiplaque effects by physicochem. actions)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16

ICS A61K007-28

NCL 424049000; 424050000

CC 62-7 (Essential Oils and Cosmetics)

IT 50-70-4, Sorbitol, biological studies 55-56-1, Chlorhexidine  
 56-81-5, Glycerol, biological studies 57-03-4 57-55-6, Propylene glycol, biological studies 60-32-2, , .epsilon.-Amino-caproic acid  
 64-19-7, Acetic acid, biological studies 77-92-9, Citric acid, biological studies 78-70-6, Linalool 80-97-7, Dihydrocholesterol  
 87-69-4, Tartaric acid, biological studies 87-99-0, Xylitol  
 89-78-1, Menthol 89-83-8, Thymol 96-49-1, Ethylene carbonate  
 97-53-0, Eugenol 99-49-0, Carvone 104-46-1, Anethole 106-22-9, Citronellol 108-32-7, Propylene carbonate 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 112-30-1, n-Decyl alcohol 121-33-5, Vanillin  
 121-54-0, Benzethonium chloride 123-03-5, Cetylpyridinium chloride  
 124-04-9, Adipic acid, biological studies 128-44-9, Sodium saccharin 137-16-6, Sodium lauroyl sarcosine 138-86-3, Limonene  
 151-21-3, Sodium lauryl sulfate, biological studies 463-79-6, Carbonic acid, biological studies 470-82-6, Cineole 471-34-1, Calcium carbonate, biological studies 471-53-4, Glycyrrhetic acid 499-44-5, Hinokitiol 515-69-5, Bisabolol 522-51-0, Dequalinium chloride 546-93-0, Magnesium carbonate 585-86-4, Lactitol 585-88-6, Maltitol 1191-50-0, Sodium myristyl sulfate 1197-18-8, Tranexamic acid 1306-06-5, Hydroxyapatite 1317-25-5, Aluminum chlorohydroxyallantoate 1335-30-4, Aluminum silicate 1344-28-1, Alumina, biological studies 1405-86-3, Glycyrrhizin 1406-18-4, Vitamin E 3380-34-5, Triclosan 4337-75-1 6915-15-7, Malic acid 7631-86-9, Silica, biological studies 7631-97-2, Sodium monofluorophosphate 7647-14-5, Sodium chloride, biological studies 7664-38-2, Orthophosphoric acid, biological studies 7681-49-4, Sodium fluoride, biological studies 7778-18-9, Calcium sulfate 7783-47-3, Stannous fluoride 7789-77-7, Calcium hydrogen phosphate dihydrate 7790-76-3, Calcium pyrophosphate 8000-41-7, Terpeneol 8059-24-3, Vitamin B6 9000-07-1, Carrageenan 9000-36-6, Karaya gum 9000-65-1, Tragacanth gum 9000-92-4, Amylase 9001-63-2, Lysozyme 9002-89-5, Polyvinyl alcohol 9003-04-7, Sodium polyacrylate 9004-32-4, Sodium carboxymethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9005-37-2, Propylene

glycol alginate 9005-38-3, Sodium alginate 9011-14-7, Polymethyl methacrylate 9025-70-1, Dextranase 9054-89-1, Superoxide dismutase 9075-84-7, Mutanase 10101-52-7, Zirconium silicate 10339-55-6, Ethyl linalool 10343-62-1, Metaphosphoric acid 11138-66-2, Xanthan gum 14306-73-1 14604-82-1, Calcium triphosphate 21645-51-2, Aluminum hydroxide, biological studies 25322-68-3, Polyethylene glycol 30950-27-7, Perillartine 50813-16-6, Sodium metaphosphate 53320-86-8, Laponite 56167-63-6 57817-89-7, Stevioside 74504-63-5 74504-64-6, Polyglyceryl laurate 76775-40-1, Somatin

(dentifrice compns. contg. carbonates and other actives for improved antiplaque effects by physicochem. actions)

L43 ANSWER 2 OF 26 HCA COPYRIGHT 2003 ACS on STN

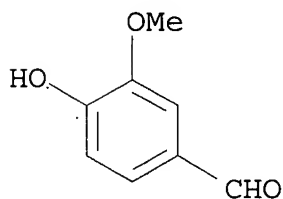
138:226419 Taste-improved dentifrices containing potassium nitrate. Nakao, Akira; Maruyama, Takashi (Sunstar, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2003073282 A2 20030312, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-262918 20010831.

AB A dentifrice for hypersensitive dentin comprises (1) KNO<sub>3</sub>, (2) anethole, and (3) .gtoreq. 1 substances selected from the group consisting of cineol, vanillin, citronellal, and cinnamic aldehyde. The dentifrices have a much reduced bitter taste of the KNO<sub>3</sub>. For example, a **toothpaste** contained KNO<sub>3</sub> 5, anethole 0.1, vanillin 0.005, silica 15, Na CMC 0.3, NaF 0.2, flavors 0.8, Na saccharin 0.1, lauryl glucoside 3, titania 0.3, sorbitol soln. 30, and distd. water balance to 100 %.

IT 121-33-5, Vanillin  
(bitter taste-masked dentifrices contg. potassium nitrate)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K033-00

ICS A61K007-16; A61K047-08; A61K047-10; A61K047-22; A61P001-02

CC 62-7 (Essential Oils and Cosmetics)

IT 104-46-1, Anethole 104-55-2, Cinnamic aldehyde 106-23-0,

Citronellal 121-33-5, Vanillin 470-82-6, Cineol

7757-79-1, Potassium nitrate, biological studies

(bitter taste-masked dentifrices contg. potassium nitrate)

L43 ANSWER 3 OF 26 HCA COPYRIGHT 2003 ACS on STN

138:158573 Method, flavoring materials, and dentifrices for enhancement of salivary secretion. Aizu, Yoko; Joichi, Atsushi; Terashima, Yuji; Haji, Shinichiro (Shiseido Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003040752 A2 20030213, 6 pp. (Japanese). CODEN:

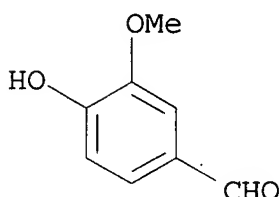
JKXXAF. APPLICATION: JP 2001-221044 20010723.

AB Salivary secretion is enhanced by olfactory stimulation with flavoring materials. The secretion of human saliva was enhanced to be .gtoreq.1.5 times that of control by olfactory stimulation with an apple flavoring compn. contg. isoamyl acetate 0.25, iso-Bu acetate 4.00, AcOEt 0.50, Et butyrate 0.50, Et 2-methylbutyrate 0.25, hexylaldehyde 4.00, 2-methylbutyl acetate 1.50, hexyl acetate 2.00, hexyl alc. 5.00, trans-2-hexenal 15.00, trans-2-hexenyl acetate 1.50, AcOH 1.00, propionic acid 0.30, hexanoic acid 0.20, and propylene glycol 64.00 wt.%. Formulation examples of **toothpastes**, mouthwashes, tablets, chewing gums, and candies are given.

IT 121-33-5, Vanillin  
(flavoring materials and dentifrices for enhancement of salivary secretion)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16

ICS A61K007-46; A61K045-00; A61P001-02

CC 62-7 (Essential Oils and Cosmetics)

Section cross-reference(s): 17, 63

IT 64-19-7, Acetic acid, biological studies 66-25-1, Hexylaldehyde  
79-09-4, Propionic acid, biological studies 79-31-2, Isobutyric  
acid 79-77-6, .beta.-Ionone 93-92-5, Styrallyl acetate  
97-62-1, Ethyl isobutyrate 100-51-6, Benzyl alcohol, biological  
studies 100-52-7, Benzaldehyde, biological studies 105-37-3,  
Ethyl propionate 105-54-4, Ethyl butyrate 106-27-4, Isoamyl  
butyrate 107-92-6, Butyric acid, biological studies 108-64-5,  
Ethyl isovalerate 109-60-4, Propyl acetate 110-19-0, Isobutyl  
acetate 111-27-3, Hexyl alcohol, biological studies 116-53-0,  
2-Methylbutyric acid 121-33-5, Vanillin 123-92-2,  
Isoamyl acetate 127-41-3, .alpha.-Ionone 141-78-6, Ethyl  
acetate, biological studies 142-62-1, Hexanoic acid, biological  
studies 142-92-7, Hexyl acetate 624-41-9, 2-Methylbutyl acetate  
928-96-1, cis-3-Hexenol 2497-18-9, trans-2-Hexenyl acetate  
4940-11-8, Ethylmaltol 5392-40-5, Citral 5471-51-2, Raspberry  
ketone 6728-26-3, trans-2-Hexenal 7452-79-1, Ethyl  
2-methylbutyrate 496878-09-2, Lactone C 10G 496878-10-5, Lactone  
C 11G

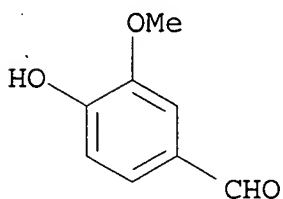
(flavoring materials and dentifrices for enhancement of salivary secretion)

L43 ANSWER 4 OF 26 HCA COPYRIGHT 2003 ACS on STN

135:322571 **Oral hygiene** compositions which mask the burn sensation and the astringency of eucalyptol and zinc. Stier, Roger E.; Zalone, John (Noville Inc., USA). U.S. US 6306372 B1 20011023, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 2000-598932 20000621.

AB An **oral hygiene** compn. contg. eucalyptol and a zinc salt, wherein the harsh taste or burn sensation ordinarily imparted by the eucalyptol and the astringency ordinarily caused by the zinc salt are abated or eliminated by effective amts. in the compn. of a taste receptor blocker, preferably in combination with a three component flavor system contg. at least one spice, at least one sweetener and at least one fruity note. The taste receptor blocker is preferably a hydrogenated, ethoxylated glycerol ester which has the mouth feel characteristic of a fat but which has a much higher degree of soly. and hence improved clarity (i.e., reduced cloudiness) for the compn. For example, a mouthwash compn. was prepd. contg. (by wt.) alc. (ethanol, essential oils, thymol and eucalyptol) 19%, Pluracare 127 0.05%, a flavor system 0.15%, Cremophor 60 2.00, water 58.61%, zinc chloride 0.09%, 70% sorbitol 20.00, and sodium saccharin 0.10%, resp. The use of Cremophor in this formula blocks the receptors in the tongue to mask the eucalyptol. In combination with the flavor system, Cremophor also masked the neg. flavor notes of the zinc, particularly dryness and astringency.

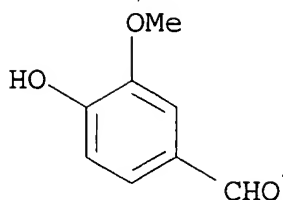
IT 121-33-5, Vanillin  
(**oral hygiene** compns. which mask the burn sensation and the astringency of eucalyptol and zinc)  
RN 121-33-5 HCA  
CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16  
NCL 424049000  
CC 62-7 (Essential Oils and Cosmetics)  
IT Taste receptors  
(blockers; **oral hygiene** compns. which mask the burn sensation and the astringency of eucalyptol and zinc)  
IT Lemon (Citrus limon)  
Raspberry  
(essence; **oral hygiene** compns. which mask the burn sensation and the astringency of eucalyptol and zinc)  
IT Castor oil  
(hydrogenated, ethoxylated; **oral hygiene** compns. which mask the burn sensation and the astringency of eucalyptol and zinc)

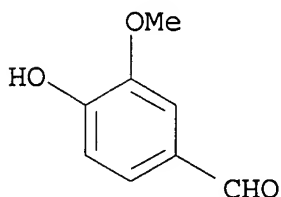
- IT Essences  
(lemon; **oral hygiene** compns. which mask the  
burn sensation and the astringency of eucalyptol and zinc)
- IT Clove (*Syzygium aromaticum*)  
Dentifrices  
Flavoring materials  
Mouthwashes  
Spices  
Sweetening agents  
(**oral hygiene** compns. which mask the burn  
sensation and the astringency of eucalyptol and zinc)
- IT Alditols  
(**oral hygiene** compns. which mask the burn  
sensation and the astringency of eucalyptol and zinc)
- IT Anise  
Ginger  
(spice; **oral hygiene** compns. which mask the  
burn sensation and the astringency of eucalyptol and zinc)
- IT 106392-12-5, Pluracare F 127  
(Pluracare F 127; **oral hygiene** compns. which  
mask the burn sensation and the astringency of eucalyptol and  
zinc)
- IT 64-17-5, Ethanol, biological studies 65-85-0, Benzoic acid,  
biological studies 89-78-1, Menthol 89-83-8, Thymol 104-46-1,  
Anethole 119-36-8, Methyl salicylate  
(**oral hygiene** compns. which mask the burn  
sensation and the astringency of eucalyptol and zinc)
- IT 56-81-5D, Glycerol, esters, ethoxylated, hydrogenated  
121-33-5, Vanillin 128-44-9, Sodium saccharin  
(**oral hygiene** compns. which mask the burn  
sensation and the astringency of eucalyptol and zinc)
- IT 470-82-6, Eucalyptol 7440-66-6, Zinc, biological studies  
7646-85-7, Zinc chloride, biological studies  
(**oral hygiene** compns. which mask the burn  
sensation and the astringency of eucalyptol and zinc)
- L43 ANSWER 5 OF 26 HCA COPYRIGHT 2003 ACS on STN  
135:81880 Disinfecting and deodorizing liquid **toothpastes**.  
Xu, Genliang (Peop. Rep. China). Faming Zhuanli Shenqing Gongkai  
Shuomingshu CN 1277015 A 20001220, 4 pp. (Chinese). CODEN:  
CNXXEV. APPLICATION: CN 1999-116511 19990609.
- AB The liq. **toothpaste** is composed of NaHCO<sub>3</sub> 1.5, NaF 0.2,  
KNO<sub>3</sub> 0.4, Na dodecyl sulfate 0.25-0.5, NaCl 0.5, glycerin 1, menthol  
0.04, vanillin 0.05, saccharin 0.015, flavors 0.02, and water 50  
parts.
- IT 121-33-5, Vanillin  
(antimicrobial dentifrice solns. contg. bicarbonate and fluoride  
and nitrate)
- RN 121-33-5 HCA  
CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)





IC ICM A61K007-16  
 CC 62-7 (Essential Oils and Cosmetics)  
 IT 56-81-5, Glycerin, biological studies 89-78-1, Menthol  
 121-33-5, Vanillin 144-55-8, Sodium bicarbonate,  
 biological studies 151-21-3, Sodium dodecyl sulfate, biological  
 studies 7647-14-5, Sodium chloride, biological studies  
 7681-49-4, Sodium fluoride, biological studies 7757-79-1,  
 Potassium nitrate, biological studies  
 (antimicrobial dentifrice solns. contg. bicarbonate and fluoride  
 and nitrate)

L43 ANSWER 6 OF 26 HCA COPYRIGHT 2003 ACS on STN  
 131:303264 Refreshing **oral hygienic** liquids. Guo,  
 Xiaohui; Wang, Gang (Peop. Rep. China). Faming Zhuanli Shenqing  
 Gongkai Shuomingshu CN 1147373 A 19970416, 3 pp. (Chinese).  
 CODEN: CNXXEV. APPLICATION: CN 1996-111329 19960725.  
 AB The title liqs. consist of ethanol 55-60, hexahydrothymol 0.3- 0.6,  
 borneol 0.7-0.9, vanillin 0.3-0.6, borax 0.4-0.6, glycerin 4- 5,  
 molasses 2-3, flavoring essence 0.4-0.8, benzoic sulfimide 0.07-  
 0.09, and water 36-38%.  
 IT 121-33-5, Vanillin  
 (refreshing **oral hygienic** liqs.)  
 RN 121-33-5 HCA  
 CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16  
 CC 62-7 (Essential Oils and Cosmetics)  
 ST refreshing **oral hygienic** liq hexahydrothymol  
 borneol  
 IT Mouthwashes  
 (refreshing **oral hygienic** liqs.)  
 IT 56-81-5, Glycerin, biological studies 64-17-5, Ethanol, biological  
 studies 81-07-2, Benzoic sulfimide 89-78-1, Hexahydrothymol  
 121-33-5, Vanillin 507-70-0, Borneol 1303-96-4, Borax  
 (refreshing **oral hygienic** liqs.)

L43 ANSWER 9 OF 26 HCA COPYRIGHT 2003 ACS on STN

129:45142 Flavor systems for **oral care** products.

Sanker, Lowell Alan; Upson, James Grigg (Procter & Gamble Company, USA). PCT Int. Appl. WO 9823250 A1 19980604, 24 pp. DESIGNATED STATES: W: BR, CA, CN, CZ, HU, MX; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1997-US21157 19971119. PRIORITY: US 1996-756671 19961126.

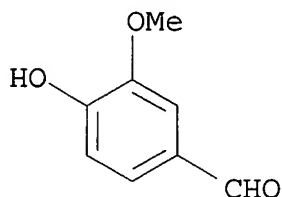
AB Disclosed are oral compns. comprising a total flavor system and one or more aq. carriers, wherein the oral compn. is a dentifrice or a mouth-rinse. The total flavor system comprises a traditional **oral care** flavor system and a dairy-cream component. Thus, a formulation contained glycerin 27.050, PEG-12 2.000, xanthan gum 0.300, CM-cellulose 0.200, water 5.000, sodium saccharin 0.450, NaF 0.243, xylitol 10.000, Poloxamer-407 2.000, sodium alkyl sulfate (27.9% soln.) 6.000, sodium carbonate 2.600, TiO<sub>2</sub> 1.000, silica 20.000, sodium bicarbonate 1.500, propylene glycol 15.011, tetrasodium pyrophosphate 5.046, calcium peroxide 0.500, and flavor system 1.100%. The flavor system contained peppermint 55.000, spearmint oil 2.000, menthol 20.000, anethole 12.500, dairy-cream flavor 2.500, and ws-3 coolant 8.000%.

IT 121-33-5, Vanillin

(flavor systems for **oral care** products)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16

ICS A61K007-20

CC 62-7 (Essential Oils and Cosmetics)

IT Essential oils

(cinnamon; flavor systems for **oral care** products)

IT Essential oils

(clove; flavor systems for **oral care** products)

IT Dentifrices

Flavor

Mouthwashes

(flavor systems for **oral care** products)

IT Bicarbonates

(flavor systems for **oral care** products)

IT Essential oils

(orange, sweet; flavor systems for **oral care** products)

products)  
 IT Essential oils  
 (peppermint; flavor systems for oral care products)  
 IT Essential oils  
 (spearmint; flavor systems for oral care products)  
 IT 87-99-0, Xylitol 104-46-1, Anethole 119-36-8, Methyl salicylate 120-57-0, Heliotropine 121-32-4, EthylVanillin 121-33-5, Vanillin 144-55-8, Sodium bicarbonate, biological studies 431-03-8, Diacetyl 1305-79-9, Calcium peroxide 1490-04-6, Menthol 3549-23-3, Methyl p-tert-butylphenylacetate 6728-31-0, 4-cis-Heptenal 7681-49-4, Sodium Fluoride, biological studies 7722-88-5, Tetrasodium pyrophosphate 16984-48-8, Fluoride, biological studies  
 (flavor systems for oral care products)

L43 ANSWER 11 OF 26 HCA COPYRIGHT 2003 ACS on STN

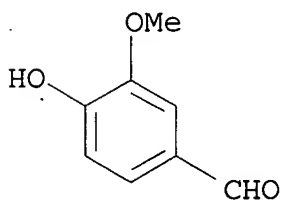
125:95620 Antiplaque, antigingivitis oral compositions containing phosphates and copper sources. Sanker, Lowell Alan; Upson, James Grigg (Procter and Gamble Company, USA). PCT Int. Appl. WO 9615768 A1 19960530, 17 pp. DESIGNATED STATES: W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1995-US14013 19951027. PRIORITY: US 1994-341716 19941118.

AB Disclosed are oral compns. such as **toothpastes**, mouthrinses, lozenges, and gums contg. at least one phosphate deriv. and a copper source. A mouthwash contained water 70.86, sorbitol soln. (70 %) 10.25, Na saccharin 0.08, ethanol 10.60, PEG hydrogenated castor oils 0.46, Na alkyl sulfate soln. (27.9 %) 0.75, CuSO4 0.05, glycine 0.03, peppermint flavor 0.24, glycerol 0.15, eugenyl monophosphate 0.15, and vanillyl monophosphate 0.35 %.

IT 121-33-5, Vanillin  
 (as flavoring agent; antiplaque, antigingivitis dentifrices contg. phosphates and copper sources)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16

ICS A61K007-22

CC 62-7 (Essential Oils and Cosmetics)

IT 60-12-8, Phenylethyl alcohol 78-70-6, Linalool 89-78-1, Menthol 89-80-5, Menthone 89-83-8, Thymol 97-53-0, Eugenol 100-52-7, Benzaldehyde, biological studies 104-45-0, Dihydroanethole 104-46-1, Anethole 104-55-2, Cinnamic aldehyde 105-54-4, Ethyl butyrate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 123-92-2, Isoamyl acetate 127-41-3, .alpha.-Ionone 138-86-3, Limonene 140-67-0, Estragole 470-82-6, Eucalyptol 4422-70-2 4940-11-8, Ethylmaltol 6485-40-1  
(as flavoring agent; antiplaque, antigingivitis dentifrices contg. phosphates and copper sources)

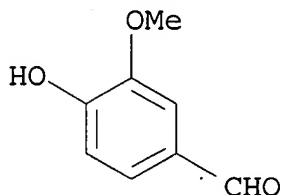
L43 ANSWER 14 OF 26 HCA COPYRIGHT 2003 ACS on STN  
107:242474 Dentifrices containing organic acids and flavors. Sugano, Hideaki; Yoshida, Fumio; Watanabe, Yukari; Tokumoto, Norifumi (Lion Corp., Japan). Jpn. Kokai Tokkyo Koho JP 62198611 A2 19870902 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-43336 19860227.

AB Dentifrices contain .gtoreq.1 compd. selected from the group comprising oleoresins, sesquiterpenes, cineole, natural essential oil, vanillins, and spilanthols as flavors, in addn. to org. acids (phytic acid, EDTA, citric acid, tartaric acid, malonic acid, L-ascorbic acid) and/or their salts, and optionally pharmaceuticals. The flavors improve or diminish the acidic taste and astringent effects of dentifrices. Thus, a **toothpaste** consisted of silica 30.0, glycerin 30.0, tin fluoride 0.5, Na lauryl sulfate 1.0, saccharin Na 0.2, CM-cellulose 1.5, NaOH 0.08, penta-Na phytate 1.0, vanillin 0.002, a flavor described below 0.7, and H2O to 100% by wt. The flavor consisted of menthol 10.0, peppermint oil 40.0, carvone 1.0, anethole 7.0, clove oil 1.0, coriander oil 1.0, pimento berry oil 1.0, orange oil 2.0, lemon oil 1.0; strawberry flavor 4.0, and EtOH 2.0 parts by wt.

IT 121-33-5, Vanillin  
(dentifrices contg. org. acids and)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16

CC 62-7 (Essential Oils and Cosmetics)

IT 77-53-2, Cedrol 87-44-5, Caryophyllene 121-32-4, Ethyl vanillin 121-33-5, Vanillin 470-82-6, Cineole 11028-42-5, Cedrene 25394-57-4 56747-96-7, Caryophyllene alcohol  
(dentifrices contg. org. acids and)

L43 ANSWER 15 OF 26 HCA COPYRIGHT 2003 ACS on STN

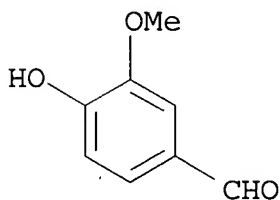
106:55689 **Toothpastes** containing a flavor that changes to a different flavor during **tooth brushing**. Sato, Hisashi (Sunstar, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 61218513 A2 19860929 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-58785 19850323.

AB **Toothpastes** contain limonene-.beta.-cyclodextrin inclusion compd., another flavor such as isoamyl acetate, and .beta.-cyclodextrin. When these **toothpastes** are used in **tooth brushing**, the flavor of the paste changes to that of limonene in about 30 s, indicating the time duration for adequate **tooth brushing**. The user can recognize the end of brushing by the change in the flavor. Thus, a **toothpaste** was prepd. consisting of CaHPO<sub>4</sub>.cntdot.2H<sub>2</sub>O 78.5, Na lauryl sulfate 1.4, saccharin 0.1, limonene-.beta.-cyclodextrin inclusion compd. 9.1, isoamyl acetate-bound D-sorbitol 3.5, .beta.-cyclodextrin 7.3, and a preservative 0.1% by wt.

IT 121-33-5  
(**toothpaste** contg. limonene-.beta.-cyclodextrin inclusion compd. and .beta.-cyclodextrin and)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC ICM A61K007-16

CC 62-7 (Essential Oils and Cosmetics)

ST **toothpaste** limonene cyclodextrin inclusion compd

IT 106372-10-5

(**toothpaste** contg. isoamyl acetate and .beta.-cyclodextrin and)

IT 7585-39-9, .beta.-Cyclodextrin

(**toothpaste** contg. limonene-.beta.-cyclodextrin inclusion compd. and isoamyl acetate and)

IT 121-33-5 123-68-2, Allyl hexanoate 123-92-2, Isoamyl acetate 2216-51-5, l-Menthol

(**toothpaste** contg. limonene-.beta.-cyclodextrin inclusion compd. and .beta.-cyclodextrin and)

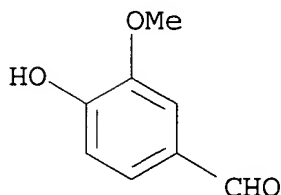
L43 ANSWER 20 OF 26 HCA COPYRIGHT 2003 ACS on STN

102:12416 Bactericidal compositions containing peroxide and peroxidase for gingival and periodontal diseases. Rosenbaum, Robert S.; Kessler, Jack (USA). U.S. US 4473550 A 19840925, 5 pp. Division of U.S. Ser. No. 225,762, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1983-455420 19830103. PRIORITY: US 1981-225762 19810116.

AB A bactericidal compn. comprises a peroxide, peroxidase [9003-99-0]

and donor mols. which are capable of being transformed into bactericidal free radicals. The bactericidal compns. are useful to treat bacterial diseases in the oral cavity to aid in prevention of **dental** caries, gingival and periodontal diseases, and an aid in sterilizing contact lenses. The admixt. can be used in a liq., paste, or dry form, and when not used in dry form, it is preferred to use 2 part formulations to prevent the reaction between peroxide and peroxidase, esp. when in dispersed form in a carrier such as water. Thus a **toothpaste** formulation contained silica 30, paraffin 10, sorbitol (70% in H<sub>2</sub>O) 40, Na dodecyl sulfate 2.5, coloring, flavoring, sweetener, preservative 2.4, NaF 0.1, NaHCO<sub>3</sub> 5.0 and H<sub>2</sub>O<sub>2</sub> 10%. Into a 1st chamber of the **toothpaste** was incorporated peroxidase (50 units/cm<sup>3</sup>) and into a 2nd chamber tyrosine [60-18-4] (0.20 g/cm<sup>3</sup>) as a source of donor mol. Used in the mouth, it showed good bactericidal action. The **toothpaste**, stored at 37.degree. for 30 days, showed a decline in enzyme activity from 50 units/cm<sup>3</sup> to 42 units/cm<sup>3</sup>, indicating satisfactory stability.

IT 121-33-5  
 (bactericidal compn. contg. peroxide, peroxidase and)  
 RN 121-33-5 HCA  
 CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC A61K037-48; A61K033-40; A61K031-075; C12P019-56  
 NCL 424094000  
 CC 63-6 (Pharmaceuticals)  
 ST bactericide peroxide peroxidase; **toothpaste** bactericide peroxide peroxidase; disinfectant contact lens peroxide peroxidase  
 IT 60-18-4, biological studies 64-04-0 65-85-0, biological studies  
 69-72-7, biological studies 73-22-3, biological studies  
 121-33-5 123-31-9, biological studies 150-13-0  
 7060-39-1  
 (bactericidal compn. contg. peroxide, peroxidase and)  
 L43 ANSWER 21 OF 26 HCA COPYRIGHT 2003 ACS on STN  
 102:12402 Bactericide for **dental** disease containing a peroxide, peroxidase and a donor molecule.. Kessler, Jack H.; Rosenbaum, Robert S. (USA). U.S. US 4476108 A 19841009, 9 pp. Cont.-in-part of U.S. Ser. No. 225,762, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1983-464596 19830207. PRIORITY: US 1981-225762 19810116.  
 AB A bactericide for treating **dental** diseases contains a bactericide such as a peroxide, peroxidase [9003-99-0] (having a limited period of activity), and a source of predetd. donor mols.

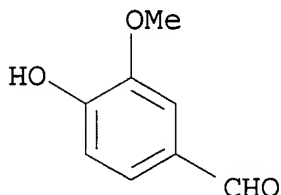
adapted to act as a substrate for the peroxidase. The 3 components interact to cause a catalyzed reaction by the peroxidase to generate free radicals from the donor mols. A mouthwash was prepd. contg. Me cellulose 1.0, arom. flavor 1.0, yrosine [60-18-4] 0.20, Na dodecyl sulfate 1.2, Na2O2 0.1, NaOBz 0.5, p-aminobenzoic acid [150-13-0] 0.40 and distd. H2O to 100% by wt. Samples contg. 1 .times. 10-2 mg/mL horseradish peroxidase showed increased bactericidal efficiency against human plaque bacteria relative to the use of H2O2.

IT 121-33-5

(bactericide contg. peroxide and peroxidase and, for **dental** diseases treatment)

RN 121-33-5 HCA

CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



IC A61K007-28; A61K007-20; A61K037-48; A61K033-40

NCL 424050000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 62

ST bactericide **dental** peroxide peroxidase

IT Bactericides, Disinfectants, and Antiseptics

(peroxides and peroxidase and donor mols. in, for **dental** diseases treatment)

IT 628-37-5 690-02-8 1313-60-6 7722-84-1, biological studies  
(bactericide contg. peroxidase and donor mol. and, for **dental** diseases treatment)

IT 60-18-4, biological studies 64-04-0 65-85-0, biological studies  
69-72-7, biological studies 73-22-3, biological studies  
121-33-5 123-31-9, biological studies 150-13-0  
7060-39-1

(bactericide contg. peroxide and peroxidase and, for **dental** diseases treatment)

IT 9003-99-0

(bactericide contg. peroxides and donor mol. and, for **dental** diseases treatment)

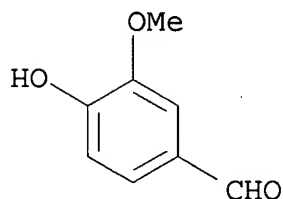
L43 ANSWER 24 OF 26 HCA COPYRIGHT 2003 ACS on STN

94:119764 Use of benzodionones in augmenting or enhancing the aroma and taste of a food. Hall, John B.; Schmitt, Frederick L.; Sprecker, Mark A. (International Flavors and Fragrances Inc., USA). U.S. US 4241097 19801223, 16 pp. (English). CODEN: USXXAM. APPLICATION: US 1979-75071 19790913.

AB Benzo- or cyclohexanodionones, alone or with adjuvants, impart a sweet, green, fruity, coumarinic, marizipan like aroma and taste to

food, chewing gums, **toothpastes**, and pharmaceuticals. Thus, 1,4-benzodioxan-2-one (I) [4385-48-2] was prepd. by adding Et3N [121-44-8] to catechol [120-80-9] and then reacting with bromoacetyl bromide [598-21-0]. I enhanced the walnut flavor of a basic walnut flavoring material formulation when added at 0.5%.

IT 121-33-5  
(flavoring materials contg., with benzodionones, for food and pharmaceuticals)  
RN 121-33-5 HCA  
CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)



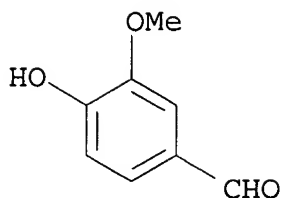
IC A23L001-226  
NCL 426536000  
CC 17-2 (Foods)  
IT 105-54-4 106-24-1 106-27-4 110-19-0 118-71-8  
121-33-5 123-29-5 123-92-2 127-41-3 134-20-3  
140-11-4 141-78-6, reactions 431-03-8 487-11-6 487-12-7  
928-96-1 3142-72-1 5471-51-2 33599-69-8 55894-36-5  
56310-15-7 58625-89-1 68697-66-5 68697-67-6 75440-80-1  
(flavoring materials contg., with benzodionones, for food and pharmaceuticals)

L43 ANSWER 25 OF 26 HCA COPYRIGHT 2003 ACS on STN  
84:42239 Chewing gum and other orally usable products containing a flavor composition. Marmo, Don; Rocco, Frank L. (International Flavors and Fragrances, Inc., USA). U.S. US 3920849 19751118, 30 pp. (English). CODEN: USXXAM. APPLICATION: US 1974-514947 19741015.

AB Flavoring materials are prepd. for use in chewing gum, chewing tobacco, chewable tablets, or **toothpaste**. These materials may be nonconfined or phys. entrapped in various edible matrixes and released slowly during chewing. For example, a cherry flavoring agent contains eugenol [97-53-0] 1.75, cinnamaldehyde [104-55-2] 4.50, anisyl acetate [1331-83-5] 6.25, anisaldehyde [123-11-5] 9.25, Et enanthate [106-30-9] 12.5, benzyl acetate [140-11-4] 15.5, vanillin [121-33-5] 25.0, Et Me Ph glycidate [77-83-8] 25, Et butyrate [105-54-4] 37.25, amyl butyrate [540-18-1] 50, tolualdehyde [1334-78-7] 125, benzaldehyde [100-52-7] 558, and EtOH 130 parts by wt. was used either directly or phys. entrapped in an edible gel to provide slow-release flavor.

IT 121-33-5  
(of cherry flavor formulation)  
RN 121-33-5 HCA  
CN Benzaldehyde, 4-hydroxy-3-methoxy- (9CI) (CA INDEX NAME)





IC A23G; A23L  
 NCL 426003000  
 CC 17-2 (Foods)  
 ST flavor slow release; chewing gum flavor; tobacco flavor;  
**toothpaste** flavor; tablet flavor  
 IT 77-83-8 78-70-6 97-53-0 100-52-7, biological studies  
 104-55-2 105-54-4 105-87-3 106-30-9 112-31-2  
**121-33-5** 123-11-5 124-13-0 140-11-4 409-02-9  
 540-18-1 1331-83-5 1334-78-7 5392-40-5 5989-27-5  
 11063-75-5 25155-15-1  
 (of cherry flavor formulation)

=> d 164 1-42 ti

L64 ANSWER 1 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Prediction of Aged Red Wine Aroma Properties from Aroma Chemical Composition. Partial Least Squares Regression Models

L64 ANSWER 2 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Hydrophobic sweetener-containing **chewing gum** having prolonged sensory benefits

L64 ANSWER 3 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Over-coated **chewing gum** formulations

L64 ANSWER 4 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Compositions for oral cavity application containing glucanase, anionic surfactants, and odor masking agents

L64 ANSWER 5 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Flavoring material for melted butter taste and aroma

L64 ANSWER 6 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Over-coated **chewing gum** formulations

L64 ANSWER 7 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI **Chewing gum** containing synephrine, ephedrine and caffeine

L64 ANSWER 8 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 TI Over-coated product including consumable center and medicament

- L64 ANSWER 9 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Flavor with taste and aroma of strawberry
- L64 ANSWER 10 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations including tableted center
- L64 ANSWER 11 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Manufacture of aerated **candies** containing citric acid and agar-sugar syrup
- L64 ANSWER 12 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations including tableted center
- L64 ANSWER 13 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Flavoring powders containing hydrogenated oils for **chewing gums** with long-lasting flavors
- L64 ANSWER 14 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations
- L64 ANSWER 15 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Method for producing **candy**
- L64 ANSWER 16 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Hydroxypropyl cellulose and anionic polymer compositions for pharmaceutical film coatings
- L64 ANSWER 17 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Dentifrice** compositions showing irritation or bitterness for prevention of swallowing
- L64 ANSWER 18 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Pungent flavor components
- L64 ANSWER 19 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Methyl salicylate replacement compositions and methods for preparing and using same
- L64 ANSWER 20 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Adsorbed resin phase spectrophotometric determination of vanillin or/and its derivatives
- L64 ANSWER 21 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Edible, low calorie compositions of a carrier and an active ingredient and methods for preparation
- L64 ANSWER 22 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Dentifrices** containing bitter glycosides and N-substituted p-menthane-3-carboxamides

- L64 ANSWER 23 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI 4-(1-Menthoxymethyl)-2-phenyl-1,3-dioxolane or its derivatives and flavor composition containing them
- L64 ANSWER 24 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Silicone compositions
- L64 ANSWER 25 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Cyclodextrin complexation
- L64 ANSWER 26 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Coating of flavoring particles with lipids
- L64 ANSWER 27 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Mouthwash** for the protection of mouth mucosa against irritants and for prevention of fungal infection.
- L64 ANSWER 28 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Non-equilibrium partition model for predicting flavor release in the mouth
- L64 ANSWER 29 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Vanillin as stabilizer for cetylpyridinium and **dentifrices** containing them
- L64 ANSWER 30 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Dentifrices** containing abrasive granules
- L64 ANSWER 31 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Preparation of alkyl vanillates as microbicides for dermatological compositions and feed preservatives
- L64 ANSWER 32 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Method of producing microcapsules
- L64 ANSWER 33 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Chewing gum** containing aspartic acid-derived sweetener and its stabilization
- L64 ANSWER 34 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Candy** bar-type pharmaceuticals containing lipid solutions and chocolate and active agents
- L64 ANSWER 35 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI **Dentifrice** water
- L64 ANSWER 36 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Reverse phase liquid chromatographic determination of some food additives
- L64 ANSWER 37 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI In vitro studies of biological effects of cigarette smoke

condensate. II. Induction of sister-chromatid exchanges in human lymphocytes by weakly acidic, semivolatile constituents

- L64 ANSWER 38 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Analysis for flavor residuals in the mouth by gas chromatography
- L64 ANSWER 39 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Vanilla flavors for food processing. IV. Utilities of vanilla components in several foods
- L64 ANSWER 40 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Rapid analysis of food additives by the TAS process
- L64 ANSWER 41 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Determination of vanillin and bourbonal in sweetmeats by a spectrophotometric method
- L64 ANSWER 42 OF 42 HCA COPYRIGHT 2003 ACS on STN  
TI Morpholin-3-ones and 4-hydroxy-3-alkoxybenzaldehyde flavor complexes

=> d l64 2,3,4,5,6,7,10,11,12,13,14,15,17,18,21,22,27,29,30,33 cbib abs  
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- L64 ANSWER 2 OF 42 HCA COPYRIGHT 2003 ACS on STN  
138:303102 Hydrophobic sweetener-containing **chewing gum** having prolonged sensory benefits. Johnson, Sonya S.; Greenberg, Michael J. (USA). U.S. Pat. Appl. Publ. US 2003072842 A1 20030417, 15 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-127858 20020422. PRIORITY: US 2001-PV290380 20010511.
- AB **Chewing gums** and methods of making same that have prolonged and enhanced sensory benefits are provided. The **chewing gums** of the present invention include a hydrophobic sweetener, a sensorally active component or trigeminal stimulant, such as a flavor, in addn. to other typical **chewing gum** ingredients. The hydrophobic sweeteners are composed of sweet org. compds. that have a low water soly.
- IC ICM A23G003-30  
NCL 426003000  
CC 17-14 (Food and Feed Chemistry)  
ST **chewing gum** hydrophobic sweetener flavor prolonged  
IT Amides, biological studies  
(acyclic; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)
- IT Echinacea  
Prickly ash (*Zanthoxylum americanum*)  
(ext.; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)
- IT **Chewing gum**  
Flavor

Flavoring materials  
 (hydrophobic sweetener-contg. **chewing gum**  
 having prolonged sensory benefits)

IT Sweetening agents  
 (hydrophobic; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Capsicum annum annum  
 (longum group, oleoresin; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Cinnamon (spice)  
 Ginger  
 Pepper (spice)  
 Senna (Cassia)  
 (oleoresin; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Resins  
 (oleoresins, capsicum; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Resins  
 (oleoresins, ext.; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Coolants  
 (oral sensory compds.; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Food functional properties  
 (sensory nerve-affecting; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Nerve  
 (trigeminal, stimulants for; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT Amides, biological studies  
 (unsatd.; hydrophobic sweetener-contg. **chewing gum** having prolonged sensory benefits)

IT 85-55-2 85-56-3 85-57-4 94-62-2, Piperine 97-53-0, Eugenol  
 99-82-1D, carboxamides, N-substitutes 104-55-2, Cinnamic aldehyde  
 119-67-5, 2-Formylbenzoic acid 121-33-5D, Vanillin, alkyl  
 ethers 121-33-5D, Vanillin, cyclic aldehydes 404-86-4,  
 Capsaicin 555-66-8, Shogaol 1151-14-0 1490-04-6, Menthol  
 1490-04-6D, Menthol, glycerin ethers 5711-41-1 17162-29-7,  
 Menthyl lactate 21528-31-4 25394-57-4, Spilanthol 29488-90-2  
 35400-60-3 36868-37-8 39711-79-0, WS3 51115-67-4, WS 23  
 54118-77-3 58253-27-3, Gingerol 60541-97-1 63187-91-7D,  
 derivs. 66267-37-6 71691-18-4 71691-30-0 75363-56-3  
 77868-31-6 82654-98-6, Vanillyl-butyl ether 87061-04-9,  
 3-1-Menthoxyp propane-1,2-diol 99784-08-4 119038-96-9  
 137116-72-4 151792-65-3 151792-66-4 151792-67-5 151792-68-6  
 151792-69-7 151792-71-1 151792-72-2 151792-74-4 151792-76-6  
 151792-78-8 151792-79-9 156273-21-1 179871-85-3 190906-37-7  
 351491-88-8 351491-92-4 351491-93-5  
 (hydrophobic sweetener-contg. **chewing gum**  
 having prolonged sensory benefits)

L64 ANSWER 3 OF 42 HCA COPYRIGHT 2003 ACS on STN

138:243278 Over-coated **chewing gum** formulations.

Ream, Ronald L.; Greenberg, Michael J.; Wokas, William J.;  
Corriveau, Christine L. (USA). U.S. Pat. Appl. Publ. US 2003049208  
A1 20030313, 20 pp., Cont.-in-part of U.S. 6,355,265. (English).  
CODEN: USXXCO. APPLICATION: US 2001-992122 20011113. PRIORITY: US  
1999-286818 19990406; WO 1999-US29742 19991214; US 2000-510878  
20000223.

AB A method for delivering a medicament or agent to an individual using  
a **chewing gum**-like product, specifically a  
coated gum-like product is provided. The medicament or agent is  
present within the coating that surrounds a center comprising a gum  
base. By chewing the product, the medicament or agent is released  
from the product. Continuing to chew the product creates a pressure  
within the buccal cavity forcing the agent or medicament directly  
into the systemic system of the individual through the oral mucosa  
contained in the buccal cavity. This greatly enhances the  
absorption of the drug into the systemic system as well as the  
bioavailability of the drug within the system. For example, an  
acetaminophen coated product contained (a) gum base center (1 g),  
and (b) coating (1 g) made of acetaminophen 80.0 g, encapsulated  
aspartame 20.0 g, aspartame 50.0 g, salt flour 2.5 g, dextrose 643.5  
g, and flavor 4.0 g.

IC ICM A61K009-68

ICS A61K038-28; A61K031-56

NCL 424048000; 514003000; 514179000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

ST **chewing gum** coating drug absorption  
bioavailability

IT Drug delivery systems

(**chewing gums**; over-coated **chewing  
gum** formulations with enhanced drug absorption and  
bioavailability)

IT Natural products, pharmaceutical

(licorice; over-coated **chewing gum**  
formulations with enhanced drug absorption and bioavailability)

IT Taste

(masking agents; over-coated **chewing gum**  
formulations with enhanced drug absorption and bioavailability)

IT Mouth

(mucosa, absorption by; over-coated **chewing gum**  
formulations with enhanced drug absorption and bioavailability)

IT Contraceptives

Vaccines

(oral; over-coated **chewing gum** formulations  
with enhanced drug absorption and bioavailability)

IT Analgesics

Anesthetics

Antacids

Anti-inflammatory agents

Antibiotics

Antihistamines  
 Antimicrobial agents  
 Antitumor agents  
 Antitussives  
 Antiviral agents  
 Cardiovascular agents  
 Cognition enhancers  
 Decongestants  
 Diuretics  
 Drug bioavailability  
 Fungicides  
 Human  
 Muscle relaxants  
 Psychotropics  
 Sweetening agents  
     (over-coated **chewing gum** formulations with  
     enhanced drug absorption and bioavailability)  
 IT Hormones, animal, biological studies  
 Mineral elements, biological studies  
 Vitamins  
     (over-coated **chewing gum** formulations with  
     enhanced drug absorption and bioavailability)  
 IT Essential oils  
     (peppermint; over-coated **chewing gum**  
     formulations with enhanced drug absorption and bioavailability)  
 IT Intestinal bacteria  
     (probiotic; over-coated **chewing gum**  
     formulations with enhanced drug absorption and bioavailability)  
 IT Diet  
     (supplements; over-coated **chewing gum**  
     formulations with enhanced drug absorption and bioavailability)  
 IT Biological transport  
     (uptake; over-coated **chewing gum** formulations  
     with enhanced drug absorption and bioavailability)  
 IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological  
 studies 57-48-7, D-Fructose, biological studies 81-07-2,  
 Saccharin 87-99-0, Xylitol 90-80-2, Glucono .delta.-lactone  
 121-32-4, Ethyl vanillin 121-33-5, Vanillin 527-07-1,  
 Sodium gluconate 585-88-6, Maltitol 1405-86-3, Glycyrrhizin  
 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 22839-47-0,  
 Aspartame 55589-62-3, Acesulfame-k 56038-13-2, Sucralose  
 64519-82-0, Isomalt  
     (over-coated **chewing gum** formulations with  
     enhanced drug absorption and bioavailability)  
 IT 58-08-2, Caffeine, biological studies  
     (over-coated **chewing gum** formulations with  
     enhanced drug absorption and bioavailability)  
 IT 90-82-4, Pseudoephedrine 103-90-2, Acetaminophen 9004-10-8,  
 Insulin, biological studies  
     (over-coated **chewing gum** formulations with  
     enhanced drug absorption and bioavailability)

L64 ANSWER 4 OF 42 HCA COPYRIGHT 2003 ACS on STN

138:175589 Compositions for oral cavity application containing glucanase, anionic surfactants, and odor masking agents. Kanno, Hideaki; Ikenishi, Takeki; Sano, Hiroshi; Hirano, Masanori (Lion Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2003055180 A2 20030226, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-250555 20010821.

AB The invention relates to a compn. for oral cavity application, e.g. **dentifrice**, contg. antiplaque glucanase and an anionic surfactant, wherein the compn. further contain vanillin, Et vanillin, maltol, ethyl maltol, furaneol, and/or ethylcyclopentenolone for masking odor due to degrading of glucanase during storage. A tooth paste contg. silica 15, sorbit 45, carrageenan 0.7, sodium alginate 0.8, propylene glycol 5, sodium lauryl sulfate 1.5, sodium saccharinate 0.1, fragrance 0.8 %, vanillin 1 ppm, dextranase 30 unit, and water balance to 100 % was prepd.

IC ICM A61K007-28

CC 62-7 (Essential Oils and Cosmetics)

ST glucanase anionic surfactant vanillin **dentifrice** odor masking

IT **Dentifrices**

(antiplaque; compns. for oral cavity application contg. glucanase, anionic surfactants and odor masking agents)

IT 118-71-8, Maltol 121-32-4, Ethyl vanillin 121-33-5, Vanillin 151-21-3, Sodium laurylsulfate, biological studies 3658-77-3, Furaneol 4940-11-8, Ethyl maltol 9015-78-5, Glucanase 9025-70-1, Dextranase 21835-01-8

(compns. for oral cavity application contg. glucanase, anionic surfactants and odor masking agents)

L64 ANSWER 5 OF 42 HCA COPYRIGHT 2003 ACS on STN

137:351950 Flavoring material for melted butter taste and aroma. Borisenko, E. V. (Russia). Russ. RU 2181249 C1 20020420, No pp. given (Russian). CODEN: RUXXE7. APPLICATION: RU 2000-129779 20001129.

AB A flavorant contains (wt.%): diacetyl 3.2-6.5, butyric acid 0.1-0.35, caproic acid 0.00015-0.00045, caprylic acid 0.00025-0.0005, capric acid 0.00009-0.00035, acetoin dimer 0.0035-0.005, anisaldehyde 0.00007-0.0001, creosol 0.0001-0.00035, .delta.-decalactone 0.03-0.06, .delta.-nonalactone 0.01-0.035, dihydrocoumarin 0.21-0.67, di-Me sulfide 0.0045-0.0085, Et acetate 0.0021-0.007, Et propionate 0.07-0.25, Et vanillin 0.009-0.02, .gamma.-decalactone 0.25-0.65, .gamma.-nonalactone 0.021-0.067, .gamma.-octalactone 0.11-0.45, .gamma.-undecalactone 0.09-0.3, guaiacol 0.000008-0.00002, isoamyl alc. 0.00007-0.00025, isobutyric aldehyde 0.000009-0.00002, lactic acid 0.015-0.04, maltol 0.21-0.7, propionic acid 0.0001-0.0004, and inactive components (to 100%). The aromatizer adds both the taste and aroma of sweet melted butter to food products and is maintained in acid media or when heated to 320.degree..

IC ICM A23L001-22



ICS A23L001-226  
CC 17-6 (Food and Feed Chemistry)  
IT Bread  
Butter substitutes  
    **Candy**  
    Cream  
    Emulsifying agents  
    Margarine  
    Odor and Odorous substances  
        (flavoring material for melted butter taste and aroma)  
IT 50-21-5, Lactic acid, biological studies 50-99-7, Dextrose,  
biological studies 57-55-6, Propylene glycol, biological studies  
63-42-3, Lactose 64-17-5, Ethyl alcohol, biological studies  
67-03-8, Thiamine hydrochloride 75-18-3, Dimethyl sulfide  
78-84-2, Isobutyric aldehyde 79-09-4, Propionic acid, biological  
studies 90-05-1, Guaiacol 93-51-6, Creosol 102-76-1, Triacetin  
104-50-7, .gamma.-Octalactone 104-61-0, .gamma.-Nonalactone  
104-67-6, .gamma.-Undecalactone 105-37-3, Ethyl propionate  
107-92-6, Butyric acid, biological studies 118-71-8, Maltol  
119-84-6 121-32-4, Ethyl vanillin 121-33-5, Vanillin  
123-11-5, Anisaldehyde, biological studies 123-51-3, Isoamyl  
alcohol 124-07-2, Caprylic acid, biological studies 141-78-6,  
Ethyl acetate, biological studies 142-62-1, Caproic acid,  
biological studies 334-48-5, Capric acid 431-03-8, Diacetyl  
705-86-2, .delta.-Decalactone 706-14-9, .gamma.-Decalactone  
3301-94-8, .delta.-Nonalactone 9000-07-1, Carrageenan  
9005-25-8D, Starch, derivs. 9050-36-6, Maltodextrin 51555-24-9,  
Acetoin dimer  
    (flavoring material for melted butter taste and aroma)

L64 ANSWER 6 OF 42 HCA COPYRIGHT 2003 ACS on STN

137:329468 Over-coated **chewing gum** formulations.

Ream, Ronald L.; Greenberg, Michael J.; Wokas, William J.;  
Corriveau, Christine L. (USA). U.S. Pat. Appl. Publ. US 2002159956  
A1 20021031, 21 pp., Cont.-in-part of U.S. 6,355,265. (English).  
CODEN: USXXCO. APPLICATION: US 2001-990628 20011113. PRIORITY: US  
1999-286818 19990406; WO 1999-US29742 19991214; US 2000-510878  
20000223.

AB Methods and products for improved delivery of a medicament or agent  
to an individual using a **chewing gum** formulation  
are provided. The medicament or agent is present within the coating  
that surrounds a gum center (the water sol. portion and a water  
insol. base portion). By **chewing the gum**, the  
medicament or agent is released from the product. Continuing to  
chew the **chewing gum** creates a pressure within  
the buccal cavity forcing the agent or medicament directly into the  
systemic system of the individual through the oral mucosa of the  
buccal cavity. This greatly enhances the absorption of the drug  
into the systemic system as well as the bioavailability of the drug  
within the system. For example, a randomized, single-dose, two-way  
crossover study was conducted in humans after administering a single  
100 mg dose of caffeine in **chewing gum** after an .

overnight fast. The test treatment was two 50 mg caffeine **chewing gum** pieces (sticks), which were chewed for 15 min and removed. The ref. treatment was one 100 mg chewable No-Doz tablet, which was chewed and swallowed. The caffeine **chewing gum** pieces appear to have a much faster rate of absorption than the No-Doz chewable tablets. The areas and peak concns. of the **chewing gum** were less than half that of No-Doz even though the gum base released one-half the caffeine that the tablet did. And the time to reach a peak for the gum was 30 min earlier than for the tablet.

IC ICM A61K009-68  
 NCL 424048000  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 1  
 ST **chewing gum** drug coating bioavailability  
 IT Drug delivery systems  
     (**chewing gums**; over-coated **chewing gum** formulations with improved drug bioavailability)  
 IT Natural products, pharmaceutical  
     (licorice, root exts., spray dried; over-coated **chewing gum** formulations with improved drug bioavailability)  
 IT Analgesics  
     Antacids  
     Anti-inflammatory agents  
     Antibiotics  
     Antihistamines  
     Antiviral agents  
     Cardiovascular agents  
     Decongestants  
     Drug bioavailability  
     Muscle relaxants  
     Psychotropics  
     Sweetening agents  
         (over-coated **chewing gum** formulations with improved drug bioavailability)  
 IT Mineral elements, biological studies  
     Vitamins  
         (over-coated **chewing gum** formulations with improved drug bioavailability)  
 IT Human  
     (over-coated **chewing gum** formulations with improved drug bioavailability in humans)  
 IT 58-08-2, Caffeine, biological studies  
     (over-coated **chewing gum** formulations with improved drug bioavailability)  
 IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2, Glucono-.delta.-lactone 90-82-4, Pseudoephedrine 103-90-2, Acetaminophen 121-32-4, Ethyl vanillin 121-33-5, Vanillin 527-07-1, Sodium gluconate 585-88-6, Maltitol 1405-86-3 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 9004-10-8, Insulin, biological studies 22839-47-0,

Aspartame 55589-62-3, Acesulfame-k 56038-13-2, Sucralose  
64519-82-0, Isomalt

(over-coated **chewing gum** formulations with  
improved drug bioavailability)

L64 ANSWER 7 OF 42 HCA COPYRIGHT 2003 ACS on STN

137:222093 **Chewing gum** containing synephrine,  
ephedrine and caffeine. Myers, Thomas R.; Shugarman, Alan;  
Felliciano, Jeffrey A.; Bucci, Luke R. (USA). U.S. Pat. Appl. Publ.  
US 2002127189 A1 20020912, 5 pp. (English). CODEN: USXXCO.  
APPLICATION: US 2001-803646 20010312.

AB **Chewing gum** compns. comprising synephrine,  
ephedrine and caffeine are provided. The compns. are useful for  
supporting thermogenesis and anorectic effects, while generating  
enhanced mental alertness and improved energy levels.

IC ICM A61K031-522

ICS A61K009-68

NCL 424048000

CC 63-6 (Pharmaceuticals)

ST **chewing gum** synephrine ephedrine caffeine

IT Flavoring materials

Schisandra chinensis

Spices

(**chewing gum** contg. synephrine, ephedrine and  
caffeine)

IT Drug delivery systems

(**chewing gums; chewing gum**  
contg. synephrine, ephedrine and caffeine)

IT Drug delivery systems

(unit doses; **chewing gum** contg. synephrine,  
ephedrine and caffeine)

IT Willow (Salix)

(white; **chewing gum** contg. synephrine,  
ephedrine and caffeine)

IT 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2,  
.delta.-Gluconolactone 117-39-5, Quercetin 121-33-5,  
Vanillin 482-35-9, Isoquercetin 4940-11-8, Ethyl maltol  
22839-47-0, Aspartame 53956-04-0, Monoammonium glycyrrhizinate  
55589-62-3, Acesulfame potassium

(**chewing gum** contg. synephrine, ephedrine and  
caffeine)

IT 58-08-2, Caffeine, biological studies 299-42-3, Ephedrine  
16589-24-5, Synephrine

(**chewing gum** contg. synephrine, ephedrine and  
caffeine)

L64 ANSWER 10 OF 42 HCA COPYRIGHT 2003 ACS on STN

135:376795 Over-coated **chewing gum** formulations  
including tableted center. Ream, Ronald L.; Corriveau, Christine  
L.; Graff, Gwendolyn; Matulewicz, Leonard (Wm. Wrigley Jr. Company,  
USA). U.S. US 6322806 B1 20011127, 22 pp., Cont.-in-part of U.S.  
Ser. No. 510,878. (English). CODEN: USXXAM. APPLICATION: US

2000-618808 20000718. PRIORITY: US 1999-286818 19990406; WO 1999-US29742 19991214; US 2000-510878 20000223.

- AB Methods and products for delivering a medicament or agent to an individual are provided as well as methods for producing the product. The product includes a coating having a medicament or agent. The medicament or agent is present within the coating that surrounds a tableted gum center (the water-sol. portion and a water-insol. base portion). By **chewing the gum**, the medicament or agent is released from the product. Continuing to chew the **chewing gum** creates a pressure within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa contained in the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. Acetaminophen-coated **chewing gums** included (1) a gum center (1g) contg. gum base 400, corn syrup 91, glycerin 49, sugar 829.9, red dye 0.7, aspartame 14, and bubble gum flavor 15.4 parts and (2) a coating (1 g) contg. acetaminophen 80, encapsulated aspartame 20, aspartame 50, salt flavor 2.5, dextrose 643.5, and bubble gum flavor 4 parts.
- IC ICM A61K009-68  
ICS A61K009-20
- NCL 424440000
- CC 63-6 (Pharmaceuticals)
- ST **chewing gum** coating drug bioavailability; acetaminophen coated **chewing gum**
- IT Drug delivery systems  
(**chewing gums**; over-coated **chewing gums** including tableted center for improved drug delivery)
- IT Natural products, pharmaceutical  
(licorice; over-coated **chewing gums** including tableted center for improved drug delivery)
- IT Analgesics  
Antacids  
Anti-inflammatory agents  
Antibiotics  
Antihistamines  
Antiviral agents  
Cardiovascular agents  
Decongestants  
Drug bioavailability  
Muscle relaxants  
Psychotropics  
(over-coated **chewing gums** including tableted center for improved drug delivery)
- IT Minerals, biological studies  
Vitamins  
(over-coated **chewing gums** including tableted center for improved drug delivery)
- IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin

87-99-0, Xylitol 90-80-2, Glucono .delta.-lactone 90-82-4,  
 Pseudoephedrine 103-90-2, Acetaminophen 121-32-4, Ethyl vanillin  
 121-33-5, Vanillin 527-07-1, Sodium gluconate 585-88-6,  
 Maltitol 1405-86-3, Glycyrrhizin 4468-02-4, Zinc gluconate  
 4940-11-8, Ethyl maltol 9004-10-8, Insulin, biological studies  
 22839-47-0, Aspartame 55589-62-3, Acesulfame-k 56038-13-2,  
 Sucralose 64519-82-0, Isomalt  
 (over-coated **chewing gums** including tableted  
 center for improved drug delivery)

L64 ANSWER 11 OF 42 HCA COPYRIGHT 2003 ACS on STN

135:60487 Manufacture of aerated **candies** containing citric  
 acid and agar-sugar syrup. Khodak, A. P.; Skokan, L. E.; Sukhikh,  
 T. N. (Nauchno-Issledovatel'skii Institut Konditerskoi  
 Promyshlennosti, Russia). Russ. RU 2145172 C1 20000210, No pp.  
 given (Russian). CODEN: RUXXE7. APPLICATION: RU 1998-115603  
 19980814.

AB Ptichiye moloko-type aerated **candies** are manufd. by  
 introduction of citric acid crystals into agar-sugar syrup at  
 110-115.degree. followed by mixing with simultaneous cooling to  
 65-70.degree. and then whipping with protein- and fat-contg.  
 materials and other ingredients. Thus, the protein- and fat-contg.  
 materials may include evapd. milk and butter; vanillin, ethanol, and  
 granulated chocolate may also be added. The **candies** have  
 improved quality and doubled storage life.

IC ICM A23G003-00

CC 17-6 (Food and Feed Chemistry)

ST **candy** aeration whipping citrate agar sugar syrup

IT Milk

(evapd.; manuf. of aerated **candies** contg. citric acid  
 and agar-sugar syrup)

IT Chocolate

(granulated; manuf. of aerated **candies** contg. citric  
 acid and agar-sugar syrup)

IT Butter

**Candy**

(manuf. of aerated **candies** contg. citric acid and  
 agar-sugar syrup)

IT Fats and Glyceridic oils, biological studies

Proteins, general, biological studies

(manuf. of aerated **candies** contg. citric acid and  
 agar-sugar syrup)

IT Syrups (sweetening agents)

(sucrose; manuf. of aerated **candies** contg. citric acid  
 and agar-sugar syrup)

IT 64-17-5, Ethanol, biological studies 77-92-9, Citric acid,

biological studies 121-33-5, Vanillin 9002-18-0, Agar

(manuf. of aerated **candies** contg. citric acid and  
 agar-sugar syrup)

L64 ANSWER 12 OF 42 HCA COPYRIGHT 2003 ACS on STN

135:24711 Over-coated **ch wing gum** formulations

including tableted center. Ream, Ronald L.; Corriveau, Christine L.; Graff, Gwendolyn; Matulewicz, Leonard (USA). U.S. Pat. Appl. Publ. US 20010002998 A1 20010607, 22 pp., Division of U.S. Ser. No. 618,808. (English). CODEN: USXXCO. APPLICATION: US 2001-759838 20010111. PRIORITY: US 2000-618808 20000718.

- AB Methods and products for delivering a medicament or agent to an individual are provided as well as methods for producing the product. The product includes a coating having a medicament or agent. The medicament or agent is present within the coating that surrounds a tableted gum center (the water sol. portion and a water insol. base portion). By **chewing** the **gum**, the medicament or agent is released from the product. Continuing to chew the **chewing gum** creates a pressure within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa contained in the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. A formulation contained in the gum center gum base 33.00, Ca carbonate 13.00, sorbitol 44.23, glycerin 4.00, flavors 2.32, encapsulated caffeine 1.50, free caffeine 0.45, lecithin 0.60, and encapsulated sweeteners 0.90%. A coating compn. is also given.
- IC ICM A61K009-68  
ICS A61K009-36
- NCL 424441000
- CC 63-6 (Pharmaceuticals)
- ST **chewing gum** tableted center
- IT Drug delivery systems  
(**chewing gums**; over-coated **chewing gum** formulations including tableted center)
- IT Analgesics  
Antacids  
Anti-inflammatory agents  
Antibiotics  
Antihistamines  
Antiviral agents  
Cardiovascular agents  
Decongestants  
Licorice (Glycyrrhiza)  
Muscle relaxants  
Psychotropics  
Sweetening agents  
(over-coated **chewing gum** formulations including tableted center)
- IT Shellac  
(over-coated **chewing gum** formulations including tableted center)
- IT Minerals, biological studies  
Vitamins  
(over-coated **chewing gum** formulations including tableted center)
- IT Drug delivery systems

- (tablets; over-coated **chewing gum** formulations including tableted center)
- IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2, Glucono-.delta.-lactone 121-32-4, Ethylvanillin 121-33-5, Vanillin 527-07-1, Sodium gluconate 585-88-6, Maltitol 3420-59-5, Isomaltol 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 22839-47-0, Aspartame 55589-62-3, Acesulfame k 56038-13-2, Sucralose
- (over-coated **chewing gum** formulations including tableted center)
- IT 58-08-2, Caffeine, biological studies 9004-10-8, Insulin, biological studies
- (over-coated **chewing gum** formulations including tableted center)
- L64 ANSWER 13 OF 42 HCA COPYRIGHT 2003 ACS on STN  
135:4841 Flavoring powders containing hydrogenated oils for **chewing gums** with long-lasting flavors. Wada, Tomoya; Hashimoto, Seiji; Hayashi, Shuichi; Giga, Toshinobu; Ueyama, Yoshitaka (Nagaoka Koryo K. K., Japan). Jpn. Kokai Tokkyo Koho JP 2001152178 A2 20010605, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-338783 19991129.
- AB The powders comprise 60-90 wt.% cryst. flavoring substances and 10-40 wt.% hydrogenated oils showing m.p. .gtoreq.40.degree.. The flavoring substances and the hydrogenated oils are mixed in molten states, cooled, and pulverized. **Chewing gum** was manufd. using flavoring powders comprising 60 g menthol and 40 g hydrogenated tallow.
- IC ICM C11B009-00  
ICS A23G003-30
- CC 17-6 (Food and Feed Chemistry)
- ST flavoring powder **chewing gum** hydrogenated oil; tallow hydrogenated menthol powder **chewing gum**
- IT **Chewing gum**  
Flavoring materials  
(flavoring powders contg. hydrogenated oils for **chewing gums** with long-lasting flavors)
- IT Fats and Glyceridic oils, biological studies  
Rape oil  
Tallow  
(hydrogenated; flavoring powders contg. hydrogenated oils for **chewing gums** with long-lasting flavors)
- IT 89-78-1, Menthol 121-33-5, Vanillin 3658-77-3, Furaneol  
(flavoring powders contg. hydrogenated oils for **chewing gums** with long-lasting flavors)

L64 ANSWER 14 OF 42 HCA COPYRIGHT 2003 ACS on STN  
133:286504 Over-coated **chewing gum** formulations.  
Ream, Ronald L.; Greenberg, Michael J.; Wokas, William J.; Corriveau, Christine L. (Wm. Wrigley Jr. Company, USA). PCT Int. Appl. WO 2000059543 A1 20001012, 55 pp. DESIGNATED STATES: W: AE,

AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE; NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US8046 20000324. PRIORITY: US 1999-286818 19990406; US 2000-510878 20000223.

- AB The product includes a coating having a medicament or agent. The medicament or agent is present within the coating that surrounds a gum center (the water sol. portion and a water insol. base portion). By **chewing** the **gum**, the medicament or agent is released from the product. Continuing to chew the **chewing gum** creates a pressure within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa contained in the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. A gum center (1 g) was coated with 1 g of a compn. contg. acetaminophen 80.0, encapsulated aspartame 20.0, aspartame 50.0, salt flour 2.5, dextrose 643.5, and bubble gum flavor 4.0 g.
- IC ICM A61K047-00  
ICS A61K009-68; A61K009-28
- CC 63-6 (Pharmaceuticals)
- ST **chewing gum** coated drug delivery
- IT Drug delivery systems.  
(**chewing gums**; over-coated **chewing gum** formulations)
- IT Natural products, pharmaceutical  
(licorice, spray-dried; over-coated **chewing gum** formulations)
- IT Analgesics  
Antacids  
Anti-inflammatory agents  
Antibiotics  
Antihistamines  
Antiviral agents  
Cardiovascular agents  
Decongestants  
Muscle relaxants  
Psychotropics  
Sweetening agents  
(over-coated **chewing gum** formulations)
- IT Minerals, biological studies  
Vitamins  
(over-coated **chewing gum** formulations)
- IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2, .delta.-Gluconolactone 121-32-4, Ethylvanillin 121-33-5, Vanillin 527-07-1, Sodium



gluconate 585-88-6, Maltitol 1405-86-3, Glycyrrhizin  
4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 22839-47-0,  
Aspartame 55589-62-3, Acesulfame potassium 56038-13-2, Sucralose  
64519-82-0, Isomalt

(over-coated **chewing gum** formulations)

IT 103-90-2, Acetaminophen  
(over-coated **chewing gum** formulations)

IT 9004-10-8, Insulin, biological studies  
(over-coated **chewing gum** formulations)

L64 ANSWER 15 OF 42 HCA COPYRIGHT 2003 ACS on STN

133:176605 Method for producing **candy**. Choe, Jin-hwan; Yu,  
Eun-kyu (Tong Yang Confectionery Co., Ltd., S. Korea). Repub. Korea  
KR 9707144 B1 19970503, No pp. given (Korean). CODEN: KRXXFC.  
APPLICATION: KR 1994-27087 19941022.

AB The method includes the steps of: combining 10-16% of maltodextrine,  
10-12% of vefure, 8-10% of white sugar, 8-10% of malt sugar, 50-60%  
of concd. strawberry juice, 2-5% of purified oil, 1-2% of pectin,  
0.1-0.3% of sodium citrate, 0.25-0.35% of emulsifier, and 0.1-2% of  
vanillin and water at about 70-90.degree.; concg. the compn. to have  
the moisture content of 8-10% at about 110-130.degree.; mixing the  
concd. compn. with strawberry flavor, concd. strawberry juice,  
citric acid, and food pigment (Red 40); molding bar-shaped  
**candies**(C) having predetd. thickness and width with an  
isolation foil(A) attached to the upper surface thereof, using a  
molding roller at 10-25.degree.; passing the bar-shaped  
**candies**(C) through a cooling tunnel at a speed of 5-15 m/min  
and cooling the bar-shaped **candies**(C) at 5-15.degree.;  
embossing the cooled **candies**(C) in various patterns with  
an embossing roller; slitting the isolation foil(A) of the  
**candies**(C); spirally rolling the slitted **candies**  
(C) at about 15 degrees; and cutting the **candies**(C) in a  
predetd. length.

IC ICM A23G003-00

CC 17-14 (Food and Feed Chemistry)

ST **candies** prepn

IT **Candy**

Confectionery

Emulsifying agents

Pigments, nonbiological

(method for producing **candy**)

IT Liquids

(oils; method for producing **candy**)

IT Flavor

Fruit and vegetable juices

(strawberry; method for producing **candy**)

IT 57-50-1, Sucrose, biological studies 68-04-2, Sodium citrate

69-79-4, Maltose 77-92-9, Citric acid, biological studies

121-33-5, Vanillin 9000-69-5, Pectin 9050-36-6,

Maltodextrin

(method for producing **candy**)

- L64 ANSWER 17 OF 42 HCA COPYRIGHT 2003 ACS on STN  
132:97893 **Dentifrice** compositions showing irritation or  
bitterness for prevention of swallowing. Sekawa, Hiroyuki; Kataoka,  
Masaru; Naito, Junko (Earth Chemical Co., Japan). Jpn. Kokai Tokkyo  
Koho JP 2000026260 A2 20000125, 7 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1998-231092 19980713.
- AB The compns. contain .gtoreq.1 compds. chosen from geraniol,  
octaacetylsucrose, phenylethyl alc., brucine, linalool, di-Et  
phthalate, linanool acetate, benzyl acetate, denatonium benzoate,  
and capsaicin and .gtoreq.1 compds. chosen from menthol, thymol,  
cineole, cinnamic aldehyde, eugenol, citronellal, vanillin, and  
xylitol. A **dentifrice** was prepd. from capsaicin 0.003,  
menthol 0.01, EtOH 5.0, glycerin 15.0, polyoxyethylene hydrogenated  
castor oil 0.4, Na phosphate 0.15, Na saccharin 0.01,  
cetylpyridinium chloride 0.01, fragrance 0.1, and H2O to 100.0 wt.%.
- IC ICM A61K007-16  
CC 62-7 (Essential Oils and Cosmetics)  
ST **dentifrice** irritation bitterness capsaicin menthol  
IT **Dentifrices**  
(**dentifrices** showing irritation or bitterness for  
prevention of swallowing)
- IT 60-12-8, Phenylethyl alcohol 78-70-6, Linalool 84-66-2, Diethyl  
phthalate 87-99-0, Xylitol 89-78-1, Menthol 89-83-8, Thymol  
97-53-0, Eugenol 104-55-2, Cinnamic aldehyde 106-23-0,  
Citronellal 106-24-1, Geraniol 115-95-7, Linalool acetate  
121-33-5, Vanillin 126-14-7, Octaacetylsucrose 140-11-4,  
Benzyl acetate 357-57-3, Brucine 404-86-4, Capsaicin 470-82-6,  
Cineole 3734-33-6, Denatonium benzoate  
(**dentifrices** showing irritation or bitterness for  
prevention of swallowing)
- L64 ANSWER 18 OF 42 HCA COPYRIGHT 2003 ACS on STN  
131:115683 Pungent flavor components. Bachmann, Jean-Pierre; Gautschi,  
Markus; Hostettler, Bernhard; Yang, Xiaogen (Givaudan-Roure  
(International) S.A., Switz.). Eur. Pat. Appl. EP 933030 A2  
19990804, 16 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR,  
GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO.  
(English). CODEN: EPXXDW. APPLICATION: EP 1998-123492 19981214.  
PRIORITY: EP 1997-122633 19971222.
- AB The invention is related to the use of 1'-acetoxychavicol acetate  
and 1'-acetoxyeugenol acetate and derivs. thereof as flavor or  
flavor components for exhibiting warm/hot, spicy and pungent  
sensations related to galangal, a flavor compn. contg. at least one  
of the compds. and to a food or beverage or a health care product  
contg. at least one of these compds.
- IC ICM A23L001-226  
CC 17-6 (Food and Feed Chemistry)  
Section cross-reference(s): 25  
IT Alcoholic beverages  
Beverages  
Chewing gum  
Dentifrices

Drugs  
Flavor  
Flavoring materials  
Food additives  
Mayonnaise

**Mouthwashes**

Potato chips

Taste

(pungent flavor components for foods, beverages and health care products)

- IT 74-88-4, reactions 74-96-4, Ethyl bromide 97-72-3, Isobutyric anhydride 106-95-6, Allyl bromide, reactions 108-24-7, Acetic anhydride 108-86-1, Bromobenzene, reactions 121-33-5, Vanillin 123-08-0, 4-Hydroxybenzaldehyde 557-93-7, 2-Bromopropene 41407-21-0, Bromopropene 112465-50-6  
(pungent flavor components for foods, beverages and health care products)

L64 ANSWER 21 OF 42 HCA COPYRIGHT 2003 ACS on STN

129:67091 Edible, low calorie compositions of a carrier and an active ingredient and methods for preparation. Turk, Richard S.; Dulebohn, Joel I.; Stitley, James W., Jr. (Natura, Inc., USA; Biotechnology Institute). U.S. US 5766636 A 19980616, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 1995-523956 19950906.

AB Disclosed are edible, low calorie compns. which contain, in addn. to an active ingredient, such as flavoring agents, sweetening agents, therapeutic agents, cosmetic agents and luminescent agents, a gel or glass carrier which is the amorphous reaction product of a basic amino acid, a carboxylic acid, a source of metallic ions and water. Methods of making the compns. are disclosed.

IC ICM A61K009-14

NCL 424489000

CC 17-6 (Food and Feed Chemistry)

Section cross-reference(s): 62, 63

IT **Candy**

(hard; edible, low calorie compns. of a carrier and an active ingredient and methods for prepn.)

IT **Candy**

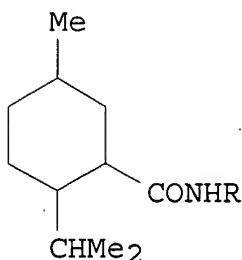
(taffy; edible, low calorie compns. of a carrier and an active ingredient and methods for prepn.)

- IT 56-12-2, 4-Aminobutyric acid, uses 56-40-6, Glycine, uses 60-32-2, 6-Aminocaproic acid 65-85-0, Benzoic acid, uses 69-72-7, Salicylic acid, uses 70-53-1, Lysine monohydrochloride 77-92-9, uses 107-95-9, .beta.-Alanine 110-15-6, Succinic acid, uses 121-33-5, Vanillin 121-34-6, Vanillic acid 150-13-0 518-47-8, Sodium fluorescein 1305-78-8, Calcium oxide, uses 1309-48-4, Magnesium oxide, uses 1310-73-2, Sodium hydroxide, uses 6915-15-7, Malic acid 14127-61-8, Calcium ion, uses 17341-25-2, Sodium ion, uses 22537-22-0, Magnesium ion, uses 23713-49-7, Zinc ion, uses 24203-36-9, Potassium ion, uses 39665-12-8, L-Lysine monohydrate  
(edible, low calorie compns. of a carrier and an active

ingredient and methods for prepn.)

L64 ANSWER 22 OF 42 HCA COPYRIGHT 2003 ACS on STN  
 126:135460 **Dentifrices** containing bitter glycosides and  
 N-substituted p-menthane-3-carboxamides. Shimada, Tosha (Lion Corp,  
 Japan). Jpn. Kokai Tokkyo Koho JP 08310930 A2 19961126 Heisei, 11  
 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-140026  
 19950515.

GI



I

AB **Dentifrices** contain bitter glycosides, e.g. menthol  
 glycosides which sustainedly release menthol, and the title menthane  
 derivs. I (R = C1-10 alkyl, alkenyl). I mask intrinsic bitterness  
 of the glycosides without inhibiting long-lasting refreshing action  
 of the aglycons. A **dentifrice** contg. 1-menthyl-.beta.-D-  
 maltoside and I (R = Et) in addn. to other ingredients was prepd.

IC ICM A61K007-22

CC 62-7 (Essential Oils and Cosmetics)

ST **dentifrice** glycoside bitterness masking  
 menthanecarboxamide; menthol glycoside bitterness masking  
**dentifrice**

IT Bitterness

**Dentifrices**

**Mouthwashes**

(**dentifrices** contg. bitter glycosides releasing  
 aglycons with refreshing effect and N-substituted  
 menthanecarboxamides for masking bitterness)

IT 60-12-8D, Phenylethyl alcohol, glycosides 69-72-7D, Salicylic  
 acid, glycosides 78-70-6D, Linalool, glycosides 89-83-8D,  
 Thymol, glycosides 90-02-8D, glycosides 97-53-0D, Eugenol,  
 glycosides 100-51-6D, Benzyl alcohol, glycosides 104-54-1D,  
 Cinnamic alcohol, glycosides 105-13-5D, Anise alcohol, glycosides  
 106-22-9D, Citronellol, glycosides 106-24-1D, Geraniol, glycosides  
 106-25-2D, Nerol, glycosides 111-27-3D, 1-Hexanol, glycosides,  
 biological studies 118-61-6D, Ethyl salicylate, glycosides  
 119-36-8D, Salicylic acid methyl ester, glycosides 121-32-4D,  
 Ethylvanillin, glycosides 121-33-5D, Vanillin, glycosides  
 498-16-8D, Lavandulol, glycosides 499-75-2D, Carvacrol, glycosides  
 507-70-0D, Borneol, glycosides 600-36-2D, 2,4-Dimethyl-3-pentanol,  
 glycosides 928-95-0D, trans-2-Hexenol, glycosides 928-96-1D,

cis-3-Hexenol, glycosides 1365-19-1D, Linalool oxide, glycosides 1490-04-6D, Menthol, glycosides 4602-84-0D, Farnesol, glycosides 7212-44-4D, Nerolidol, glycosides 8060-47-7D, glycosides 11031-45-1D, Santalol, glycosides 16203-27-3 18604-50-7 37271-90-2D, Mugol, glycosides 50674-52-7D, Amylcinnamic alcohol, glycosides 68129-81-7D, Vetiverol, glycosides 70561-11-4 76898-74-3 80449-98-5D, Liral, glycosides 117017-90-0 157202-17-0 186091-56-5 186091-57-6 186091-58-7 186091-59-8 186091-60-1 186209-48-3D, Nonadienol, glycosides

(**dentifrices** contg. bitter glycosides releasing aglycons with refreshing effect and N-substituted menthanecarboxamides for masking bitterness)

IT 39668-83-2 39711-79-0, N-Ethyl-p-menthane-3-carboxamide 57233-04-2 73410-10-3 73410-11-4 73410-12-5  
(**dentifrices** contg. bitter glycosides releasing aglycons with refreshing effect and N-substituted menthanecarboxamides for masking bitterness)

L64 ANSWER 27 OF 42 HCA COPYRIGHT 2003 ACS on STN

122:17191 **Mouthwash** for the protection of mouth mucosa against irritants and for prevention of fungal infection.. Szabo, Sandor; Ling, Antal; David, Agoston; Tombor, Janos (Hung.). Hung. Teljes HU 64835 A2 19940328, 6 pp. (Hungarian). CODEN: HUXXB. APPLICATION: HU 1992-9202677 19920818.

AB The **mouthwash** comprises benzalkonium chloride 0.02, thymol 0.05, camphor 0.05, menthol 0.1, vanillin 0.03, trichloroisobutyl alc. 0.1, saccharin 0.1, glycerol 15, EtOH 35 by wt., and the balance water. The **mouthwash** can be formulated as an instant tablet.

IC ICM A61K031-045

ICS A61K031-335

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 62

ST **mouthwash** fungicide antiirritant

IT Fungicides and Fungistats

#### **Mouthwashes**

(anti-irritant and antifungal **mouthwash**)

IT Quaternary ammonium compounds, biological studies  
(alkylbenzyl dimethyl, chlorides, anti-irritant and antifungal **mouthwash**)

IT Mouth

(mucosa, anti-irritant and antifungal **mouthwash**)

IT 76-22-2, Camphor 81-07-2, Saccharin 89-83-8, Thymol 121-33-5, Vanillin 1490-04-6, Menthol 30026-43-8  
(anti-irritant and antifungal **mouthwash**)

L64 ANSWER 29 OF 42 HCA COPYRIGHT 2003 ACS on STN

119:146398 Vanillin as stabilizer for cetylpyridinium and **dentifrices** containing them. Tsunoda, Yasuo; Muroi, Keiko; Matsubara, Akimasa; Inami, Norihito; Mesaki, Junichiro (Earth Chemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 05140106 A2 19930608 Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1991-353535 19911114.

AB Stable **dentifrices** contain vanillin as stabilizer for cetylpyridinium. Aq. 1% EtOH soln. (pH 6.5) contg. 0.01% (wt./vol.) cetylpyridinium chloride (I) and 10 mg/100 mL ethylvanillin (II) was heated at 120.degree. for 3 h to show 98.23% residual I. **Dentifrice** contg. II 0.003, flavor 0.5, I 0.01, EtOH 1, Na<sub>2</sub>HPO<sub>4</sub> 0.04, NaH<sub>2</sub>PO<sub>4</sub> 0.08, and H<sub>2</sub>O to 100% (wt./vol.) was formulated.

IC ICM C07D213-16

ICS A61K007-22

CC 62-7 (Essential Oils and Cosmetics)

ST **dentifrice** microbicide cetylpyridinium stabilizer vanillin

IT **Dentifrices**

(cetylpyridinium and vanillin derivs. in, stable)

IT Fungicides and Fungistats

(cetylpyridinium, **dentifrices** contg., vanillin (derivs.) as stabilizers for)

IT Bactericides, Disinfectants, and Antiseptics

(cetylpyridinium, **dentifrices** contg., vanillin derivs. as stabilizers for)

IT 121-32-4, Ethylvanillin 121-33-5, Vanillin 148-53-8,

o-Vanillin 621-59-0, Isovanillin

(**dentifrices** contg. cetylpyridinium and, as stabilizer)

IT 123-03-5, Cetylpyridinium chloride 7773-52-6, Cetylpyridinium

(**dentifrices** contg. vanillin derivs. and, stable)

L64 ANSWER 30 OF 42 HCA COPYRIGHT 2003 ACS on STN

117:118244 **Dentifrices** containing abrasive granules. Hirose, Kazuko; Maeda, Kouji; Arai, Kenichi; Inoue, Takeshi (Kao Corp., Japan). Eur. Pat. Appl. EP 473171 A1 19920304, 15 pp. DESIGNATED STATES: R: DE, ES, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1991-114582 19910829. PRIORITY: JP 1990-229876 19900831; JP 1990-407182 19901210.

AB A **dentifrice** comprises (1) an easily breakable granules of abrasives, (2) menthol, and (3) flavoring components. The granules keep their shape in the compn., but are deformed or broken when the compn. is used in the mouth. The compn. exhibits a greatly reduced powdery feeling and gives a pleasant feeling to users. An aq. slurry contg. zeolite, silica, and Mg aluminate metasilicate was spray-dried for granulation. A **dentifrice** contained the obtained granules 15.0, glycerin 10.0, sorbitol 30.0, carrageenan 2.0, Na lauryl sulfate 1.2, Na saccharin 0.1, methylparaben 0.1, a flavoring compn. (contg. peppermint oil, menthol, spearmint oil, carvone, and anethole) 0.8, and purified water to 100.0 %.

IC ICM A61K007-16

ICS A61K007-26

CC 62-7 (Essential Oils and Cosmetics)

ST **dentifrice** abrasive granule flavor

IT **Dentifrices**

(abrasive granules and naturally occurring flavors in)

IT Basil

Capsicum

Caraway  
Cardamom  
Coriander  
Geranium (horticultural common name)  
Ginger  
Hyssop  
Laurel  
Lavender  
Mace (spice)  
Nutmeg (spice)  
Osmanthus  
Rose  
Rosemary  
Thyme  
Vanilla  
Ylang-ylang  
    (exts., **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Mentha arvensis piperascens  
Lactones  
    (flavoring agents, **dentifrices** contg. abrasive granules  
    and)  
IT Flavor  
    (plant oils and exts. as, for **dentifrices**)  
IT Carrot  
    (seed, exts., **dentifrices** contg. abrasive granules and,  
    as flavoring agents)  
IT Essential oils  
    (caraway, **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Essential oils  
    (davana, **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Essential oils  
    (elemi, **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Essential oils  
    (geranium, **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Essential oils  
    (ginger, **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Perfumes  
    (jasmine, exts., **dentifrices** contg. abrasive granules  
    and, as flavoring agents)  
IT Fats and Glyceridic oils  
    (laurel, **dentifrices** contg. abrasive granules and, as  
    flavoring agents)  
IT Resins  
    (oleo-, of pepper and ginger, **dentifrices** contg.  
    abrasive granules and, as flavoring agents)  
IT Resins

- (oleo-, orris, exts., **dentifrices** contg. abrasive granules and, as flavoring agents)
- IT Essential oils  
(peppermint, flavoring agents, **dentifrices** contg. abrasive granules and)
- IT Essential oils  
(rosemary, **dentifrices** contg. abrasive granules and, as flavoring agents)
- IT Essential oils  
(spearmint, flavoring agents, **dentifrices** contg. abrasive granules and)
- IT Essential oils  
(thyme, *Thymus vulgaris*, **dentifrices** contg. abrasive granules and, as flavoring agents)
- IT Lavender  
(*L. hybrida*, exts., **dentifrices** contg. abrasive granules and, as flavoring agents)
- IT Essential oils  
(*Osmanthus*, **dentifrices** contg. abrasive granules and, as flavoring agents)
- IT 1344-28-1, Alumina, biological studies 7631-86-9, Silica, biological studies 7789-77-7, Dicalcium phosphate dihydrate 9086-60-6, Ammonium carboxymethyl cellulose 10101-52-7, Zirconium silicate 12511-31-8, Magnesium aluminate metasilicate 13463-67-7, Titanium dioxide, biological studies 30079-89-1, Magnesium metasilicate  
(abrasive granules contg., in manuf. of **dentifrices**)
- IT 76-22-2, Camphor 79-76-5, .gamma.-Ionone 79-77-6, .beta.-Ionone 89-83-8, Thymol 99-49-0, Carvone 104-46-1, Anethole 104-67-6, .gamma.-Undecalactone 118-71-8, Maltol 120-57-0, Heliotropin 121-32-4, Ethyl vanillin 121-33-5, Vanillin 127-41-3, .alpha.-Ionone 464-43-7, d-Borneol 1490-04-6, Menthol 4940-11-8, Ethyl maltol 141441-04-5, .delta.-Ionone  
(flavoring agent, **dentifrices** contg. abrasive granules and)
- IT 7646-85-7, Zinc chloride, biological studies 7722-88-5 9000-01-5, Acacia gum 9002-88-4, Polyethylene 9004-57-3, Ethyl cellulose  
(granules contg. abrasives and, in manuf. of **dentifrices**)

L64 ANSWER 33 OF 42 HCA COPYRIGHT 2003 ACS on STN

112:54096 **Chewing gum** containing aspartic acid-derived sweetener and its stabilization. (Warner-Lambert Co., USA). Jpn. Kokai Tokkyo Koho JP 01043153 A2 19890215 Heisei, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-188585 19880729. PRIORITY: US 1987-79849 19870730.

AB A method of stabilizing sweeteners derived from L-aspartic acid such as aspartame is disclosed. The method comprises prepg. (1) a gum base, a free sweetener, and org. acids; and (2) a gum base contg. flavoring agents and water-contg. agents. The ingredients 1 and 2 are arranged to form a surface-to-surface relation, or optionally



the sweetener is encapsulated, so that the sweetener is not contacted with the flavoring agents and water in 2 to ensure its stability. In **chewing gum** contg. encapsulated aspartame, aspartame conversion to diketopiperazine (less sweet) was inhibited.

- IC ICM A23G003-30
- ICS A23L001-236
- CC 17-13 (Food and Feed Chemistry)
- ST **chewing gum** aspartame sweetener stability
- IT Chicle
- Cinnamon (spice)
- Flavoring materials
- Gutta-percha
- Jelutong
- Peppermint
- Sweetening agents
- Vanilla
- Monellins
- (in **chewing gum** manuf., stabilization of aspartame in relation to)
- IT **Chewing gum**
- (manuf. of, stabilization of aspartame in relation to)
- IT Flavoring materials
- (cherry, in **chewing gum** manuf., stabilization of aspartame in relation to)
- IT Resins
- (crown **gum**, in **chewing gum** manuf., stabilization of aspartame in relation to)
- IT Flavoring materials
- (fruit, in **chewing gum** manuf., stabilization of aspartame in relation to)
- IT Flavoring materials
- (grape, in **chewing gum** manuf., stabilization of aspartame in relation to)
- IT Flavoring materials
- (strawberry, in **chewing gum** manuf., stabilization of aspartame in relation to)
- IT 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid, biological studies 57-50-1D, chloride-contg. derivs. 69-65-8, Mannitol 75-07-0, Acetaldehyde, biological studies 77-92-9, biological studies 81-07-2, Saccharin 87-69-4, biological studies 87-99-0, Xylitol 97-96-1 100-52-7, Benzaldehyde, biological studies 100-88-9D, Cyclamic acid, salts 104-55-2, Cinnamaldehyde 106-23-0 106-26-3, Neral 106-72-9, 2,6-Dimethyl-5-heptenal 110-17-8, Fumaric acid, biological studies 110-62-3, Valeraldehyde 112-31-2, Decanal 112-54-9, Dodecanal 120-14-9, Veratrum aldehyde 120-57-0, Heliotropin 121-32-4 121-33-5 122-40-7 123-11-5, Anisic aldehyde, biological studies 123-72-8, Butylaldehyde 124-04-9, Hexanedioic acid, biological studies 124-13-0, Octanal 124-19-6, Nonanal 1083-30-3 1334-78-7, Tolyaldehyde 1335-39-3, Hexenal 1405-86-3 1490-04-6, Menthol 4826-62-4, 2-Dodecenal 5392-40-5,

Citral 6915-15-7, Malic acid 7779-07-9, 2,6-Dimethyloctanal  
9002-88-4, Polyethylene 9003-20-7 9003-27-4, Polyisobutylene  
9003-55-8, Butadiene-styrene polymer 9005-25-8D, Starch,  
hydrolyzates 9010-85-9 33665-90-6, Acesulfame 57817-89-7  
80863-62-3D, hydrate

(in **chewing gum** manuf., stabilization of  
aspartame in relation to)

IT 22839-47-0, Aspartame  
(stabilization of, in **chewing gum**)

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L55 ANSWER 1 OF 1 HCA COPYRIGHT 2003 ACS on STN

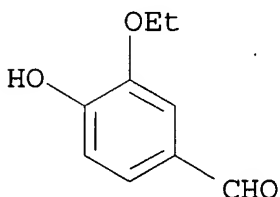
126:190944 Oral or topical **warming** compounds comprising phosphate derivatives. Kupper, Philip Lloyd (The Procter and Gamble Company, USA). PCT Int. Appl. WO 9702273 A1 19970123, 19 pp. DESIGNATED STATES: W: AU, BR, CA, CN, JP, MX, NO, SG, TR; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US10194 19960612. PRIORITY: US 1995-498103 19950705.

AB Oral or topical compns. useful in providing a perceived sensation of **warmth** comprise phosphate derivs. and a pharmaceutically acceptable carrier. A cough syrup contained dextromethorphan hydrobromide 0.1326, guaifenesin 1.3263, granular sugar 54.1280, Tween 80 0.0199, glycerin 1.9999, propylene glycol 17.9100, sodium citrate 0.5194, citric acid anhyd. 0.3363, potassium sorbate 0.0995, and vanillyl alc. Bu ether monophosphate (prepn. given) q.s. 100%.

IT 121-32-4, Ethyl vanillin  
(oral or topical **warming** compds. comprising phosphate derivs.)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07F009-12

ICS A61K007-16; A61K009-20; A61K009-48; C07F009-24; C07F009-18

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 79

ST oral topical **warming** compd phosphate deriv; cough syrup  
vanillyl butyl ether phosphate

IT Natural products, pharmaceutical  
(Senna; oral or topical **warming** compds. comprising phosphate derivs.)

IT Drug delivery systems  
(capsules; oral or topical **warming** compds. comprising phosphate derivs.)

IT Drugs  
(gastrointestinal; oral or topical **warming** compds. comprising phosphate derivs.)

IT Capsicum annum annum  
(longum group; oral or topical **warming** compds. comprising phosphate derivs.)

IT Drug delivery systems  
(lozenges; oral or topical **warming** compds. comprising phosphate derivs.)

- IT Fats and Glyceridic oils, biological studies  
(mustard; oral or topical **warming** compds. comprising  
phosphate derivs.)
- IT Resins  
(oleoresins; oral or topical **warming** compds. comprising  
phosphate derivs.)
- IT Analgesics  
Anise  
Antihistamines  
Antitussives  
Capsicum frutescens  
Chimaphila  
Clove (Syzygium aromaticum)  
**Coolants**  
Decongestants  
Expectorants  
**Flavoring** materials  
Ginger  
Horseradish (Armoracia lapathifolia)  
Influenza  
Pepper (**spice**)  
Peppermint (Mentha piperita)  
Spearment (Mentha spicata)  
Sweetening agents  
(oral or topical **warming** compds. comprising phosphate  
derivs.)
- IT Essential oils  
(oral or topical **warming** compds. comprising phosphate  
derivs.)
- IT Birch (Betula)  
(sweet; oral or topical **warming** compds. comprising  
phosphate derivs.)
- IT Drug delivery systems  
(syrups; oral or topical **warming** compds. comprising  
phosphate derivs.)
- IT Capsicum  
(tincture; oral or topical **warming** compds. comprising  
phosphate derivs.)
- IT 187595-47-7 187595-48-8  
(oral or topical **warming** compds. comprising phosphate  
derivs.)
- IT 187595-46-6P  
(oral or topical **warming** compds. comprising phosphate  
derivs.)
- IT 56-81-5, 1,2,3-Propanetriol, biological studies 57-06-7, Allyl  
isothiocyanate 59-67-6, Niacin, biological studies 60-29-7,  
Ether, biological studies 64-17-5, Ethyl alcohol, biological  
studies 67-66-3, Chloroform, biological studies 100-51-6, Benzyl  
alcohol, biological studies 104-55-2 119-36-8, Methyl salicylate  
122-48-5, Zingerone 123-51-3 138-86-3, Limonene 141-78-6,  
Ethyl acetate, biological studies 404-86-4, Capsaicin 555-66-8,  
Shogaol 1490-04-6, Menthol 5533-03-9, Vanillyl alcohol methyl

ether 13184-86-6 14193-29-4 19408-84-5, Dihydrocapsaicin  
20279-06-5, Homodihydrocapsaicin 27113-22-0, Paradol 28789-35-7,  
Nordihydrocapsaicin 58253-27-3, Gingerol 58493-48-4,  
Homocapsaicin 70150-56-0 81995-38-2 81995-39-3 81995-41-7  
81995-42-8

(oral or topical **warming** compds. comprising phosphate  
derivs.)

IT 10025-87-3, Phosphoric trichloride 82654-98-6  
(oral or topical **warming** compds. comprising phosphate  
derivs.)

IT 57-50-1, Sucrose, biological studies 60-12-8, Benzeneethanol  
69-65-8, Mannitol 78-70-6 89-80-5, Menthone 89-83-8, Thymol  
93-14-1, Guaifenesin 97-53-0, Eugenol 100-52-7, Benzaldehyde,  
biological studies 103-90-2, Acetaminophen 104-45-0,  
Dihydroanethole 104-46-1, Anethole 105-54-4, Ethylbutyrate  
113-92-8, Chlorpheniramine maleate 121-32-4, Ethyl  
vanillin 121-33-5, Vanillin 123-92-2, Isoamyl acetate  
125-69-9, Dextromethorphan hydrobromide 127-41-3, .alpha.-Ionone  
128-44-9, Sodium saccharin 140-67-0, Estragole 147-24-0,  
Diphenhydramine hydrochloride 154-41-6, Phenylpropanolamine  
hydrochloride 345-78-8, Pseudoephedrine hydrochloride 470-82-6,  
Eucalyptol 550-70-9, Triprolidine hydrochloride 562-10-7  
1009-11-6 4422-70-2 4940-11-8, Ethyl maltol 6485-40-1,  
L-Carvone 15687-27-1, Ibuprofen 22204-53-1, Naproxen  
22839-47-0, Aspartame 39711-79-0, n-Ethyl-p-menthane-3-carboxamide  
51115-67-4 53956-04-0, Monoammonium glycyrrhizate 55589-62-3,  
Acesulfame k 87061-04-9, 3-1-Menthoxyp propane 1,2-diol  
(oral or topical **warming** compds. comprising phosphate  
derivs.)

=> d 152 1-15 cbib abs hitstr hitind

L52 ANSWER 1 OF 15 HCA COPYRIGHT 2003 ACS on STN

137:145649 Flavored tooth conditioning compositions and methods. Combe,  
Edward C.; Warford, John H.; Warford, John H. (USA). U.S. Pat.  
Appl. Publ. US 2002106334 A1 20020808, 12 pp., Cont.-in-part of U.S.  
6,342,204. (English). CODEN: USXXCO. APPLICATION: US 2001-13441  
20011207. PRIORITY: US 1999-427943 19991027.

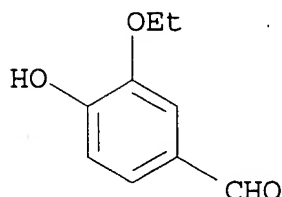
AB Compns. for conditioning a tooth surface prior to the application of  
a **dental** materials which will desirably form a  
substantially permanent bond with the conditioned tooth surface are  
provided. The conditioning compns. contains a flavorant such as a  
water-based flavorant, an oil-based flavorant, a solid (e.g.,  
powder) flavorant, or a non-oil-based flavorant. Methods of using  
the conditioning compn. to prep. a tooth surface, e.g., for the  
application of a free-radically polymerizable **dental**  
material are also described. For example, polished enamel surfaces  
were conditioned with phosphoric acid-based etchants, free 3M  
Scotchbond etchant or Unietch etchant contg. 13.1% flavor.  
Following etching, two coats of 3M Single Bond adhesive was applied.  
The adhesive was air dried and visible light cured. A cylinder of

resin composite tooth restorative material (Restorative Z100) was applied and visible light cured. There was no significant difference between these two groups (shear bond strength for etchant with and without flavoring agent was 20.8 and 19.6 Mpa, resp.). All of the flavors described can be used with the etchants; no instances were found of a flavored etchant described here that does not work. Neither the flavoring agents nor the solvents such as water, alc., propylene glycol, glycerin, etc., were seen to interfere with the procedure.

IT 121-32-4, Ethyl vanillin  
(flavored acidic **dental** conditioning compns. for prepn.  
of tooth surface for bonding of polymerizable material)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K007-16

NCL 424049000

CC 63-7 (Pharmaceuticals)  
Section cross-reference(s): 62

ST flavoring agent acid **dental** conditioner

IT **Dental** materials and appliances  
(adhesives; flavored acidic **dental** conditioning compns.  
for prepn. of tooth surface for bonding of polymerizable  
material)

IT **Dental** materials and appliances  
(cements; flavored acidic **dental** conditioning compns.  
for prepn. of tooth surface for bonding of polymerizable  
material)

IT Acrylic polymers, biological studies  
(cements; flavored acidic **dental** conditioning compns.  
for prepn. of tooth surface for bonding of polymerizable  
material)

IT **Dental** materials and appliances  
(composites; flavored acidic **dental** conditioning  
compns. for prepn. of tooth surface for bonding of polymerizable  
material)

IT Tooth  
(enamel; flavored acidic **dental** conditioning compns.  
for prepn. of tooth surface for bonding of polymerizable  
material)

IT **Dental** materials and appliances  
(etching agents; flavored acidic **dental** conditioning  
compns. for prepn. of tooth surface for bonding of polymerizable  
material)

- IT Flavoring materials  
Vanilla  
(flavored acidic **dental** conditioning compns. for prepn.  
of tooth surface for bonding of polymerizable material)
- IT Alcohols, biological studies  
Essential oils  
(flavored acidic **dental** conditioning compns. for prepn.  
of tooth surface for bonding of polymerizable material)
- IT Syrups (sweetening agents)  
(hydrolyzed starch, solids; flavored acidic **dental**  
conditioning compns. for prepn. of tooth surface for bonding of  
polymerizable material)
- IT **Dental** materials and appliances  
(orthodontic brackets, bonding; flavored acidic **dental**  
conditioning compns. for prepn. of tooth surface for bonding of  
polymerizable material)
- IT Polymerization  
(radical; flavored acidic **dental** conditioning compns.  
for prepn. of tooth surface for bonding of polymerizable  
material)
- IT **Dental** materials and appliances  
(resins; flavored acidic **dental** conditioning compns.  
for prepn. of tooth surface for bonding of polymerizable  
material)
- IT 50-81-7, L-Ascorbic acid, biological studies 56-81-5, Glycerol,  
biological studies 57-55-6, Propylene glycol, biological studies  
64-17-5, Ethanol, biological studies 77-92-9, Citric acid,  
biological studies 110-16-7, Maleic acid, biological studies  
110-17-8, Fumaric acid, biological studies 121-32-4, Ethyl  
vanillin 7664-38-2, Ultraetch, biological studies 9003-01-4,  
Poly(acrylic acid) 94810-08-9, Orthodontic resin 103171-30-8,  
Scotchbond etchant 191681-60-4, Transbond XT 229010-56-4, Single  
Bond 336183-72-3, Restorative Z 100  
(flavored acidic **dental** conditioning compns. for prepn.  
of tooth surface for bonding of polymerizable material)

L52 ANSWER 2 OF 15 HCA COPYRIGHT 2003 ACS on STN

137:37652 Warming **compositions** containing benzaldehydes for  
**food and drink or for oral care**

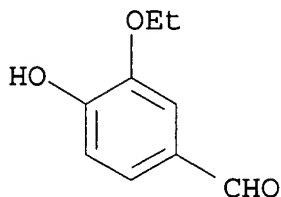
**formulations.** Kumamoto, Hiroyasu; Kitamura, Tatsuo

(Takasago International Corporation, Japan). Eur. Pat. Appl. EP  
1215258 A2 20020619, 13 pp. DESIGNATED STATES: R: AT, BE, CH, DE,  
DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI,  
RO, MK, CY, AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP  
2001-403207 20011212. PRIORITY: JP 2000-376814 20001212.

AB This invention relates to a warming compn. for **food and**  
**drink or for oral care** prepn. which produce an  
excellent and long-lasting warming effect and cause no or little  
irritation to mucous membranes. A **flavor** compn. for  
**food and drink or for oral care** prepn.  
comprising **beverages or oral care**  
prepn. is also disclosed. Thus, a candy formulation contained

vanillin 0.005, CA-10 0.005, granulated sugar 52.3, starch syrup 46.6, citric acid 1, and **flavor** 0.09%. The candy produced a warming effect in the the throat.

IT 121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde  
(warming compns. contg. benzaldehydes for **food** and  
drink or for **oral care** formulations)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C09K005-00  
ICS A23L001-30; A61K007-00  
CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 17, 62  
ST warming compn **food** drink; benzaldehyde **oral care**  
IT **Beverages**  
Candy  
Chewing gum  
Dentifrices  
**Flavor**  
**Food**  
Human  
Mouthwashes  
(warming compns. contg. benzaldehydes for **food** and  
drink or for **oral care** formulations)  
IT 121-32-4, 3-Ethoxy-4-hydroxybenzaldehyde 121-33-5,  
Vanillin 139-85-5, 3,4-Dihydroxybenzaldehyde 82654-98-6,  
Vanillyl butyl ether 195863-84-4, TPG 1 207792-35-6, CA 10  
(warming compns. contg. benzaldehydes for **food** and  
drink or for **oral care** formulations)

L52 ANSWER 3 OF 15 HCA COPYRIGHT 2003 ACS on STN

129:45142 Flavor systems for **oral care** products.

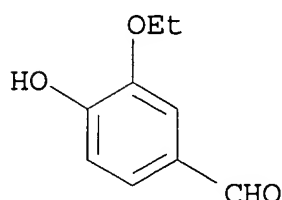
Sanker, Lowell Alan; Upson, James Grigg (Procter & Gamble Company, USA). PCT Int. Appl. WO 9823250 A1 19980604, 24 pp. DESIGNATED STATES: W: BR, CA, CN, CZ, HU, MX; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1997-US21157 19971119. PRIORITY: US 1996-756671 19961126.

AB Disclosed are oral compns. comprising a total flavor system and one or more aq. carriers, wherein the oral compn. is a dentifrice or a mouth-rinse. The total flavor system comprises a traditional **oral care** flavor system and a dairy-cream component. Thus, a formulation contained glycerin 27.050, PEG-12



2.000, xanthan gum 0.300, CM-cellulose 0.200, water 5.000, sodium saccharin 0.450, NaF 0.243, xylitol 10.000, Poloxamer-407 2.000, sodium alkyl sulfate (27.9% soln.) 6.000, sodium carbonate 2.600, TiO<sub>2</sub> 1.000, silica 20.000, sodium bicarbonate 1.500, propylene glycol 15.011, tetrasodium pyrophosphate 5.046, calcium peroxide 0.500, and flavor system 1.100%. The flavor system contained peppermint 55.000, spearmint oil 2.000, menthol 20.000, anethole 12.500, dairy-cream flavor 2.500, and ws-3 coolant 8.000%.

IT 121-32-4, EthylVanillin  
(flavor systems for oral care products)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K007-16  
ICS A61K007-20  
CC 62-7 (Essential Oils and Cosmetics)  
IT Essential oils  
(cinnamon; flavor systems for oral care products)  
IT Essential oils  
(clove; flavor systems for oral care products)  
IT Dentifrices  
Flavor  
Mouthwashes  
(flavor systems for oral care products)  
IT Bicarbonates  
(flavor systems for oral care products)  
IT Essential oils  
(orange, sweet; flavor systems for oral care products)  
IT Essential oils  
(peppermint; flavor systems for oral care products)  
IT Essential oils  
(spearmint; flavor systems for oral care products)  
IT 87-99-0, Xylitol 104-46-1, Anethole 119-36-8, Methyl salicylate 120-57-0, Heliotropine 121-32-4, EthylVanillin 121-33-5, Vanillin 144-55-8, Sodium bicarbonate, biological studies 431-03-8, Diacetyl 1305-79-9, Calcium peroxide 1490-04-6, Menthol 3549-23-3, Methyl p-tert-butylphenylacetate 6728-31-0, 4-cis-Heptenal 7681-49-4, Sodium Fluoride, biological studies 7722-88-5, Tetrasodium pyrophosphate 16984-48-8, Fluoride,

biological studies  
(flavor systems for oral car products)

L52 ANSWER 4 OF 15 HCA COPYRIGHT 2003 ACS on STN

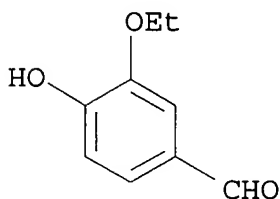
126:108688 Correction of: 125:95620 Antiplaque, antigingivitis oral compositions containing phosphates and copper sources. Sanker, Lowell Alan; Upson, James Grigg (Procter and Gamble Company, USA). PCT Int. Appl. WO 9615768 A1 19960530, 17 pp. DESIGNATED STATES: W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD; MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1995-US14013 19951027. PRIORITY: US 1994-341716 19941118.

AB Disclosed are oral compns. such as **toothpastes**, mouth rinses, lozenges, and gums contg. at least one phosphate deriv. and a copper source. A mouthwash contained water 70.86, sorbitol soln. (70 %) 10.25, Na saccharin 0.08, ethanol 10.60, PEG hydrogenated castor oils 0.46, Na alkyl sulfate soln. (27.9 %) 0.75, CuSO4 0.05, glycine 0.03, peppermint flavor 0.24, glycerol 0.15, eugenyl monophosphate 0.15, and vanillyl monophosphate 0.35 %.

IT **121-32-4**  
(as flavoring agent; antiplaque, antigingivitis dentifrices contg. phosphates and copper sources)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K007-16

ICS A61K007-22

CC 62-7 (Essential Oils and Cosmetics)

IT 60-12-8, Benzeneethanol 78-70-6 89-78-1 89-80-5 89-83-8  
97-53-0 100-52-7, Benzaldehyde, biological studies 104-45-0  
104-46-1 104-55-2 105-54-4 **121-32-4** 121-33-5  
123-92-2 127-41-3 138-86-3 140-67-0 470-82-6 4422-70-2  
4940-11-8 6485-40-1

(as flavoring agent; antiplaque, antigingivitis dentifrices contg. phosphates and copper sources)

L52 ANSWER 5 OF 15 HCA COPYRIGHT 2003 ACS on STN

125:95620 Antiplaque, antigingivitis oral compositions containing phosphates and copper sources. Sanker, Lowell Alan; Upson, James Grigg (Procter and Gamble Company, USA). PCT Int. Appl. WO 9615768 A1 19960530, 17 pp. DESIGNATED STATES: W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV,

MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG.

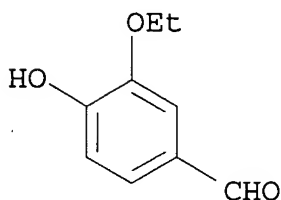
(English). CODEN: PIXXD2. APPLICATION: WO 1995-US14013 19951027. PRIORITY: US 1994-341716 19941118.

AB Disclosed are oral compns. such as **toothpastes**, mouthrinses, lozenges, and gums contg. at least one phosphate deriv. and a copper source. A mouthwash contained water 70.86, sorbitol soln. (70 %) 10.25, Na saccharin 0.08, ethanol 10.60, PEG hydrogenated castor oils 0.46, Na alkyl sulfate soln. (27.9 %) 0.75, CuSO<sub>4</sub> 0.05, glycine 0.03, peppermint flavor 0.24, glycerol 0.15, eugenyl monophosphate 0.15, and vanillyl monophosphate 0.35 %.

IT **121-32-4, Ethyl vanillin**  
(as flavoring agent; antiplaque, antigingivitis dentifrices contg. phosphates and copper sources)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K007-16

ICS A61K007-22

CC 62-7 (Essential Oils and Cosmetics)

IT 60-12-8, Phenylethyl alcohol 78-70-6, Linalool 89-78-1, Menthol 89-80-5, Menthone 89-83-8, Thymol 97-53-0, Eugenol 100-52-7, Benzaldehyde, biological studies 104-45-0, Dihydroanethole 104-46-1, Anethole 104-55-2, Cinnamic aldehyde 105-54-4, Ethyl butyrate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 123-92-2, Isoamyl acetate 127-41-3, .alpha.-Ionone 138-86-3, Limonene 140-67-0, Estragole 470-82-6, Eucalyptol 4422-70-2 4940-11-8, Ethylmaltol 6485-40-1

(as flavoring agent; antiplaque, antigingivitis dentifrices contg. phosphates and copper sources)

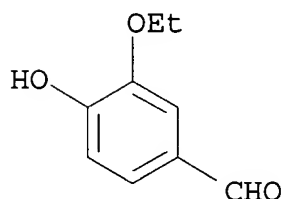
L52 ANSWER 6 OF 15 HCA COPYRIGHT 2003 ACS on STN

118:45496 Dentifrice compositions containing stannous compounds and an antioxidant. Waterfield, Philip C. (Unilever N. V., Neth.; Unilever PLC). Eur. Pat. Appl. EP 514966 A2 19921125, 8 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, PT, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1992-201293 19920507. PRIORITY: GB 1991-10721 19910517.

AB Stannous compd.-contg. dentifrices are disclosed which also contain an antioxidant to reduce or prevent the conversion of stannous ions to stannic ions in the dentifrice. The stannous compds. are e.g. SnF<sub>2</sub> or Sn<sub>2</sub>P<sub>2</sub>O<sub>7</sub>. In **toothpastes** formulated with antioxidants (Pr gallate, Et vanillin, etc.), the antioxidants

inhibited the oxidn. of Sn(II) to Sn(IV). The antioxidants had a beneficial effect on Sn(II) stability even in the presence of addnl. citrate (which can have a solubilizing effect on stannous ions in certain formulations). Formulations of the **toothpastes** contg. Sn(II) compds. and an antioxidant are given.

IT 121-32-4, Ethyl vanillin  
(dentifrice contg. stannous compd. and, to prevent stannous ion oxidn.)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



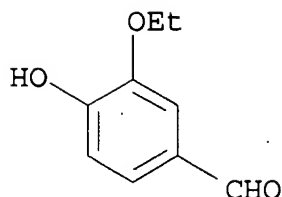
IC ICM A61K007-18  
CC 62-7 (Essential Oils and Cosmetics)  
IT 121-32-4, Ethyl vanillin 121-79-9, Propyl gallate  
128-37-0, Butylated hydroxytoluene, biological studies 153-18-4,  
Rutin 480-16-0, Morin 528-48-3, Fisetin 1406-18-4, Vitamin E  
25013-16-5, Butylated hydroxyanisole  
(dentifrice contg. stannous compd. and, to prevent stannous ion oxidn.)

L52 ANSWER 7 OF 15 HCA COPYRIGHT 2003 ACS on STN

108:156284 Flavors for pseudoginseng containing **toothpastes**.  
Li, Jianhua (Kunming Perfumery, Peop. Rep. China). Faming Zhuanli  
Shenqing Gongkai Shuomingshu CN 85106825 A 19870325, 6 pp.  
(Chinese). CODEN: CNXXEV. APPLICATION: CN 1985-106825 19850907.

AB A flavor for manuf. of pseudoginseng root-contg. **toothpastes**  
contains menthol 20-35, pseudoginseng root tincture 10-30, orange  
oil 3-9, Et enanthate 1-3, myricinic aldehyde 0.8-3.0, citral  
0.8-3.5, eugenol 0.02-2.0, Me o-aminobenzoate 0.3-1, Et vanillin  
1.5-4, EtOAc 5-20, Et acetoacetate 1-5, Et hexanoate 0.3-1.5, Et  
nonylate 0.1-1.0, Et laurate 0.1-1.0, peppermint oil 1-7,  
wintergreen oil 0.1-1 benzaldehyde 0.1-1.5, methylionone 1-7, myrcia  
oil 1-7, anise oil 1-5, fused oil 0.1-5, glacial acetic acid 0.1-0.5  
and EtOH 1-10%.

IT 121-32-4, Ethyl vanillin  
(flavors contg., for pseudoginseng **toothpastes**)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



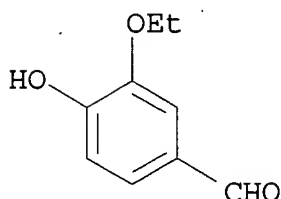
IC ICM A61K007-26  
 CC 62-7 (Essential Oils and Cosmetics)  
 ST pseudoginseng **toothpaste** flavor  
 IT Fusel oil  
     (flavors contg., for pseudoginseng **toothpastes**)  
 IT Flavoring materials  
     (for pseudoginseng-contg. **toothpastes**)  
 IT Aldehydes, biological studies  
     (C30-31, flavors contg., for pseudoginseng **toothpastes**)  
 IT Oils, essential  
     (anise, flavors contg., for pseudoginseng **toothpastes**)  
 IT Oils, essential  
     (bay, flavors contg., for pseudoginseng **toothpastes**)  
 IT Oils, essential  
     (orange, sweet, flavors contg., for pseudoginseng  
     **toothpastes**)  
 IT Oils, essential  
     (peppermint, flavors contg., for pseudoginseng  
     **toothpastes**)  
 IT Oils, essential  
     (wintergreen, flavors contg., for pseudoginseng  
     **toothpastes**)  
 IT Ginseng  
     (P. pseudoginseng, root tincture, **toothpastes** contg.,  
     flavoring materials for)  
 IT 64-17-5, Ethanol, biological studies 64-19-7, Acetic acid,  
     biological studies 97-53-0, Eugenol 100-52-7, Benzaldehyde,  
     biological studies 106-30-9, Ethyl enanthate 106-33-2, Ethyl  
     laurate 121-32-4, Ethyl vanillin 123-29-5, Ethyl  
     nonylate 123-66-0 134-20-3, Methyl O-aminobenzoate 141-78-6,  
     Ethyl acetate, biological studies 141-97-9, Ethyl acetoacetate  
     1335-46-2, Methyl ionone 1490-04-6, Menthol 5392-40-5, Citral  
     (flavors contg., for pseudoginseng **toothpastes**)

L52 ANSWER 8 OF 15 HCA COPYRIGHT 2003 ACS on STN  
 107:242474 Dentifrices containing organic acids and flavors. Sugano,  
     Hideaki; Yoshida, Fumio; Watanabe, Yukari; Tokumoto, Norifumi (Lion  
     Corp., Japan). Jpn. Kokai Tokkyo Koho JP 62198611 A2 19870902  
     Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
     1986-43336 19860227.

AB Dentifrices contain .gtoreq.1 compd. selected from the group  
     comprising oleoresins, sesquiterpenes, cineole, natural essential  
     oil, vanillins, and spilanthols as flavors, in addn. to org. acids

(phytic acid, EDTA, citric acid, tartaric acid, malonic acid, L-ascorbic acid) and/or their salts, and optionally pharmaceuticals. The flavors improve or diminish the acidic taste and astringent effects of dentifrices. Thus, a **toothpaste** consisted of silica 30.0, glycerin 30.0, tin fluoride 0.5, Na lauryl sulfate 1.0, saccharin Na 0.2, CM-cellulose 1.5, NaOH 0.08, penta-Na phytate 1.0, vanillin 0.002, a flavor described below 0.7, and H<sub>2</sub>O to 100% by wt. The flavor consisted of menthol 10.0, peppermint oil 40.0, carvone 1.0, anethole 7.0, clove oil 1.0, coriander oil 1.0, pimento berry oil 1.0, orange oil 2.0, lemon oil 1.0, strawberry flavor 4.0, and EtOH 2.0 parts by wt.

IT 121-32-4, Ethyl vanillin  
(dentifrices contg. org. acids and)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

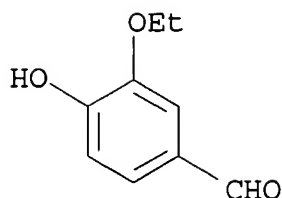


IC ICM A61K007-16  
CC 62-7 (Essential Oils and Cosmetics)  
IT 77-53-2, Cedrol 87-44-5, Caryophyllene 121-32-4, Ethyl vanillin 121-33-5, Vanillin 470-82-6, Cineole 11028-42-5, Cedrene 25394-57-4 56747-96-7, Caryophyllene alcohol  
(dentifrices contg. org. acids and)

L52 ANSWER 9 OF 15 HCA COPYRIGHT 2003 ACS on STN  
103:123151 Methoxybenzaldehyde from the corresponding phenolic benzaldehyde. Boden, Richard M.; Tyszkiewicz, Theodore J.; Licciardello, Michael; Vock, Manfred H.; Vinals, Joaquin F.; Whalen, Patrick; Hanna, Marie R. (International Flavors and Fragrances Inc., USA). U.S. US 4515987 A 19850507, 32 pp. Division of U.S. Ser. No. 496,568 abandoned. (English). CODEN: USXXAM. APPLICATION: US 1984-624757 19840626. PRIORITY: US 1982-384924 19820604; US 1983-496568 19830520.

AB 3,4-(EtO)(MeO)C<sub>6</sub>H<sub>3</sub>CHO (I), useful for augmenting or enhancing the aroma or taste of consumable materials including foodstuffs, **toothpastes**, tobaccos, perfumes, detergents, etc., was prepd. Thus, treating 3,4-(EtO)(HO)C<sub>6</sub>H<sub>3</sub>CHO with ClCO<sub>2</sub>Me gave a mixt. of I and 3,4-(EtO)(MeO<sub>2</sub>CO)C<sub>6</sub>H<sub>3</sub>CHO. Also prepd. was heliotropyl Me carbonate.

IT 121-32-4  
(methylation of)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C07C045-61

NCL 568433000

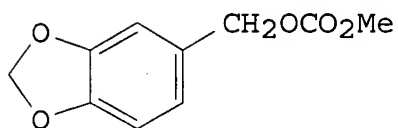
CC 25-15 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 17, 62

IT 121-32-4  
(methylation of)

L52 ANSWER 10 OF 15 HCA COPYRIGHT 2003 ACS on STN

101:7139 Heliotropyl methyl carbonate and its use in flavoring. Boden, Richard M.; Tyszkiewicz, Theodore J.; Licciardello, Michael; Vock, Manfred H.; Vinals, Joaquin F.; Whalen, Patrick; Hanna, Marie R. (International Flavors and Fragrances Inc., USA). U.S. US 4430354 A 19840207, 32 pp. Division of U.S. Ser. No. 384,924. (English). CODEN: USXXAM. APPLICATION: US 1983-496648 19830520. PRIORITY: US 1983-384924 19830604.

GI



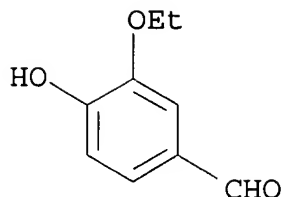
I

AB The title compd. (I) was prepd. by transesterification of heliotropyl acetate with MeOCO2Me. Also, 4,3-HO(EtO)C6H3CHO was treated with MeO2CCl in MeCOEt in the presence of the phase transfer catalyst Aliquat 336 to give a mixt. contg. 4,3-MeOCO2(EtO)C6H3CHO and 4,3-MeO(EtO)C6H3CHO. I and/or this mixt. were used in flavor or perfume formulation for chewing gum, tobacco products, **toothpastes**, chewable vitamins, foodstuffs, detergents, and soaps.

IT 121-32-4  
(reaction of, with Me chloroformate)

RN 121-32-4 HCA

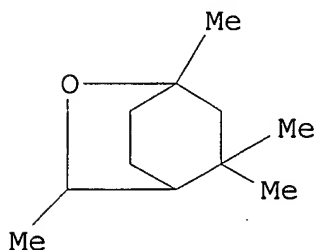
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC A23L001-226  
NCL 426536000  
CC 28-5 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 17, 46, 62, 63  
IT 121-32-4  
(reaction of, with Me chloroformate)

L52 ANSWER 11 OF 15 HCA COPYRIGHT 2003 ACS on STN  
95:95775 Use of 1,3,5,5,-tetramethyl-2-2-oxabicyclo[2.2.2.]octane in augmenting or enhancing the aroma or taste of foods. Sprecker, Mark A.; Schmitt, Frederick L.; Vock, Manfred H.; Vinals, Joaquin F.; Kiwala, Jacob (International Flavors and Fragrances Inc., USA). U.S. US 4269862 19810526, 21 pp. Cont.-in-part of U.S. 4,195,099. (English). CODEN: USXXAM. APPLICATION: US 1979-77539 19790921.

GI



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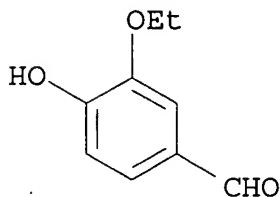
AB 1,3,5,5-Tetramethyl-2-oxabicyclo[2.2.2.]octane (I) [78474-70-1] is prepd. and used to give a fresh or minty flavor to food, tobacco, pharmaceuticals, and other products. Thus, mesityl oxide [141-79-7] in a suspension of  $\text{AlCl}_3$  in MePh was reacted with isoprene [78-79-5] to yield 4-acetyl-1,3,3-trimethyl-1-cyclohexene [55695-36-8]. The latter was reduced with  $\text{NaBH}_3$  to give 1,3,3-trimethyl-1-cyclohexene-4-ethanol [78474-71-2] which was reacted with iso-PrOH [67-63-0] and  $\text{H}_2\text{SO}_4$  to yield I. A eucalyptus oil flavor formulation showed more natural eucalyptus flavor as well as a pleasant citrus nuance and sour effect when I was included at 200 ppm.

IT 121-32-4  
(flavoring material contg. tetramethyloxabicyclooctane and)



RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC A23L001-226

NCL 426536000

CC 17-2 (Foods)

Section cross-reference(s): 62, 63

IT Dentifrices

(toothpaste, flavoring material for, tetramethyloxabicyclooctane)

IT 75-07-0, biological studies 78-70-6 80-56-8 87-44-5 92-52-4,  
biological studies 94-62-2 98-55-5 99-49-0 99-86-5  
105-87-3 110-89-4, biological studies 118-71-8 120-57-0  
**121-32-4** 121-33-5 123-11-5, biological studies  
127-91-3 138-86-3 141-12-8 470-82-6 495-91-0 555-10-2  
586-62-9 1329-99-3 4674-50-4 5392-40-5 14575-74-7  
38049-26-2

(flavoring material contg. tetramethyloxabicyclooctane and)

L52 ANSWER 12 OF 15 HCA COPYRIGHT 2003 ACS on STN

93:192041 Product for oral hygiene and tooth

care. Ray, Alok Kumar; Watson, Charles Andrew (Unilever N. V., Neth.). Ger. Offen. DE 2944021 19800514, 14 pp. (German).

CODEN: GWXXBX. APPLICATION: DE 1979-2944021 19791031.

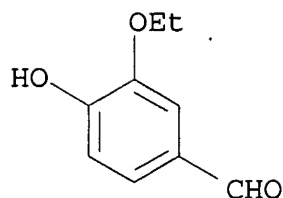
AB The bitterness of bactericides in dentifrices and mouth preps. is masked by a mixt. of arom. oils and their synthetic equivs., e.g., monoterpenes or salicylates. A **toothpaste** contg. chlorhexidine gluconate [18472-51-0] was prepd. and 1% of the following bitterness masking compn. added: menthol [89-78-1] 16.0, anethol [104-46-1] 10.0, cineol [470-82-6] 10.0, menthone [89-80-5] 1.2, eugenol [97-53-0] 1.0, orange oil 1.0, ground mint oil 10.0, citronella oil 2.0, peppermint oil 47.6, benzyl salicylate [118-58-1] 1.0 and Et maltol 0.2%.

IT **121-32-4**

(bitterness of chlorhexidine in mouth preps. masking by compns. contg.)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC A61K007-16

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 62

IT 89-78-1 89-80-5 97-53-0 104-46-1 118-58-1 119-36-8

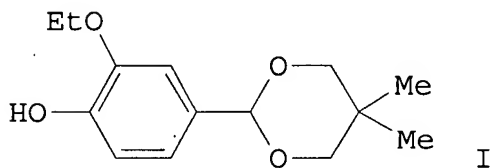
121-32-4 470-82-6

(bitterness of chlorhexidine in mouth preps. masking by compns. contg.)

L52 ANSWER 13 OF 15 HCA COPYRIGHT 2003 ACS on STN

90:100398 Tobacco **compositions** containing 3-ethoxy-4-hydroxybenzaldehyde 2,2-dimethyl propanediol acetal. Kulka, Kurt; Mild, Frank; Fischetti, Frank, Jr. (Fritzsche Dodge and Olcott, Inc., USA). U.S. US 4128101 19781205, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1977-797508 19770510.

GI



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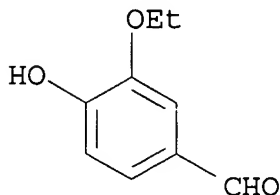
AB The title compd. (I), having a less pronounced vanilla **odor** than the Et vanillin from which it was prepd. and a smooth chocolate by-note, enhanced the **flavor** and **aroma** of tobacco products and comestibles. I was prepd. by combining 3-ethoxy-4-hydroxybenzaldehyde (Et vanillin) and a mol. excess of 2,2-dimethylpropanediol in the presence of benzene. Oxalic acid was added as a catalyst, and the reaction mixt. was refluxed, washed, and purified by fractional distn. (m.p. 59.5-61.5.degree.). Cigaretts made from a flue-cured tobacco blend contg. 100 ppm of I were smoked by a test panel, which concluded the **flavored** cigarettes were sweeter and richer in **taste** and **aroma** than controls. Honey, chocolate, and maple **flavor** compns. contg. I were prepd. which were suitable for incorporation into bakery products, **beverages**, and sugar syrups as well as tobacco products.

IT 121-32-4

(reaction of, with dimethylpropanediol)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC A24B003-12

NCL 131017000R

CC 11-7 (Plant Biochemistry)

Section cross-reference(s): 17

ST tobacco **flavor** ethyl vanillin methylpropanediol acetal;**food flavor** ethoxyhydroxybenzaldehyde acetalIT **Flavoring** materials

(ethoxyhydroxybenzaldehyde dimethylpropanediol acetal)

IT Bakery products

**Beverages**

Syrups

Tobacco products

(ethoxyhydroxybenzaldehyde dimethylpropanediol acetal as **flavor** enhancer for)

IT 69367-40-4P

(prepn. of, as **flavor** enhancers for **food** and tobacco products)IT **121-32-4**

(reaction of, with dimethylpropanediol)

L52 ANSWER 14 OF 15 HCA COPYRIGHT 2003 ACS on STN

86:104526 Analysis of aromatic materials in **foods**. Part 2.

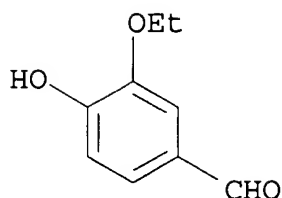
Separation of carbonyl compounds from the aromatic **mixtures** of vanillin and ethyl vanillin; gas chromatographic separation and mass spectrometric identification of vanillin and ethyl vanillin as the TMS ether. Braun, G.; Hieke, E. (Chem. Untersuchungsamt, Mainz, Fed. Rep. Ger.). Deutsche Lebensmittel-Rundschau, 72(11), 393-4 (German) 1976. CODEN: DLRUAJ. ISSN: 0012-0413.

AB An ether ext. of the **odor** compds. of rum was evapd., dissolved in MeOH, shaken with satd. aq. Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>, extd. with ether, and the excess sulfite decompd. with HCl. The carbonyls were silylated with N-methyl-N-trimethylsilyltrifluoroacetamide for gas chromatog. on a column of 4% nitrile silicone oil XE 60 on Chromosorb G at 150-80.degree. (3.degree./min) with flame ionization detection. Mass spectroscopy was used to identify vanillin [121-33-5] and ethylvanillin [121-32-4] in the ext.

IT **121-32-4**(detn. of, in **food odors**)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



CC 17-1 (Foods)  
Section cross-reference(s): 16  
ST gas chromatog carbonyl; chromatog carbonyl; carbonyl detn  
flavor  
IT Odor and Odorous substances  
(carbonyl compds. detn. in)  
IT Carbonyl compounds, analysis  
(detn. of, in food odors)  
IT Alcoholic beverages  
(rum, carbonyl compds. detn. in)  
IT 121-32-4 121-33-5  
(detn. of, in food odors)

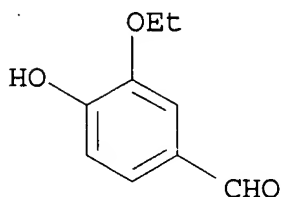
L52 ANSWER 15 OF 15 HCA COPYRIGHT 2003 ACS on STN  
76:57967 Organic trisulfide-containing chocolate **flavor**  
**compositions**. Nakel, Gunther M.; Hiler, George D. (Procter  
and Gamble Co.). U.S. US 3619210 19711109, 5 pp. (English).  
CODEN: USXXAM. APPLICATION: US 1970-400 19700102.

AB The title compns. are prepd. from a blend of certain sulfides, esp.  
org. trisulfide pyrazines, phenols, and aldehydes, the ratio of S to  
non-S compds. being 1:3500. Thus, dimethyltrisulfide 0.028,  
2,6-dimethylpyrazine 93.161, ethylvanillin 4.008, and  
isovaleraldehyde 2.803% were mixed and allowed to stand covered for  
3 hr. The result was a compn. of chocolate-like **flavor**  
and **aroma**.

IT 121-32-4  
(in chocolate flavoring material)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC A23L; A23G  
NCL 099140000R  
CC 17 (Foods)  
ST pyrazine trisulfide food flavor; phenol  
trisulfide food flavor; chocolate food

IT **flavor** trisulfide  
IT **Flavoring** materials  
(chocolate, dimethyltrisulfide in)  
IT Chocolate  
(**flavoring** material, dimethyltrisulfide in)  
IT 108-50-9 121-32-4 590-86-3 3658-80-8  
(in chocolate **flavoring** material)

=> d l53 1-20 ti

L53 ANSWER 1 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavoring** material for melted butter **taste** and  
**aroma**

L53 ANSWER 2 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavoring** material with cream-like **flavor** and  
**aroma**

L53 ANSWER 3 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Food** aromatizer with heated milk **fragrance** and  
**taste**

L53 ANSWER 4 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavoring** agent with **flavor** and **taste**  
of concentrated milk

L53 ANSWER 5 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Butyrate-containing **flavoring** material with butter  
**taste** and **aroma**

L53 ANSWER 6 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavor** with **taste** and **aroma** of  
strawberry

L53 ANSWER 7 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Ambient-stable tea-based **beverage** preserved with cinnamic  
acid, dimethyl dicarbonate, and essential oil component

L53 ANSWER 8 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Ambient-stable tea-based **beverage** preserved with minimal  
amounts of sorbic or benzoic acid

L53 ANSWER 9 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Preparation of 4-hydroxy-3-alkoxybenzaldehyde 2,3-butanediol acetals  
as **perfumes**

L53 ANSWER 10 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Use of N-neohexyl-.alpha.-aspartyl-L-phenylalanine methyl ester as a  
**flavor** modifier

L53 ANSWER 11 OF 20 HCA COPYRIGHT 2003 ACS on STN

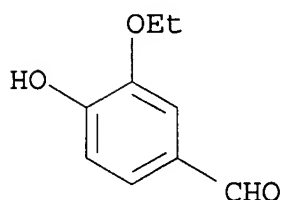
- TI Preparation of oxime carboxylic acid derivatives for delivery of **organoleptic** and antimicrobial compounds
- L53 ANSWER 12 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavor** enhancement process
- L53 ANSWER 13 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Food** containing horseradish **flavor**
- L53 ANSWER 14 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Flavor** delivery system for producing a microcapsule **flavor**
- L53 ANSWER 15 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Dicarboalkoxy dioxolane derivatives for use as **flavor** additives and their preparation
- L53 ANSWER 16 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Preparation of glucopyranoside derivatives as **flavorants** and **odorants**
- L53 ANSWER 17 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI 3-Ethoxy-4-hydroxybenzaldehyde-2,2-dimethylpropanediolacetal and its use as a **flavoring** in tobacco and **food**
- L53 ANSWER 18 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Additives for improving the **taste** of saccharin
- L53 ANSWER 19 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI **Food essence** with vanilla **flavor**
- L53 ANSWER 20 OF 20 HCA COPYRIGHT 2003 ACS on STN  
TI Modification of groats

=> d 153 2,3,4,5,6,8,12,13,14,19 cbib abs hitstr hitind

- L53 ANSWER 2 OF 20 HCA COPYRIGHT 2003 ACS on STN  
137:351949 **Flavoring** material with cream-like **flavor** and **aroma**. Borisenko, E. V. (Russia). Russ. RU 2181016  
C1 20020410, No pp. given (Russian). CODEN: RUXXE7. APPLICATION:  
RU 2000-129780 20001129.
- AB A **flavorant** with cream-like **flavor** and **aroma** contains (wt.%): maltol 0.1-0.3; .delta.-decalactone 0.01-0.025; diacetyl 0.0009-0.002; acetoin dimer 0.001-0.003; butyric acid 0.0067-0.0095; acetic acid 0.027-0.042; .delta.-dodecalactone 0.01-0.25; dihydrocoumarin 0.001-0.0025; Et vanillin 0.002-0.005; trans-2-hexenal 0.0008-0.0015; lactic acid 0.009-0.023; citrus oil 0.007-0.01; alkali 0.0007-0.00095; thiamin hydrochloride 0.0025-0.0041; and solvent or solvent and emulsifier mixt. or filler up to 100%. The **flavor** and **odor** are retained in **food** products contg. an acid medium or

requiring heating to 320.degree. in ready-to-eat products.

- IT 121-32-4, Ethyl vanillin  
(**flavoring** material with cream-like **flavor**  
and **odor**)
- RN 121-32-4 HCA
- CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



- IC ICM A23L001-22  
ICS A23L001-226
- CC 17-6 (Food and Feed Chemistry)
- ST **flavoring** cream **flavor** **aroma**
- IT Essential oils  
(citrus; **flavoring** material with cream-like  
**flavor** and **odor**)
- IT Bakery products  
Cream substitutes  
Emulsifying agents  
**Flavoring** materials  
**Food** emulsions  
Margarine  
(**flavoring** material with cream-like **flavor**  
and **odor**)
- IT Alkali metal hydroxides  
Glycoproteins  
Soybean oil  
(**flavoring** material with cream-like **flavor**  
and **odor**)
- IT Essential oils  
(lemon; **flavoring** material with cream-like  
**flavor** and **odor**)
- IT Surfactants  
(nonionic; **flavoring** material with cream-like  
**flavor** and **odor**)
- IT Polysaccharides, biological studies  
(sulfated; **flavoring** material with cream-like  
**flavor** and **odor**)
- IT Fats and Glyceridic oils, biological studies  
(vegetable; **flavoring** material with cream-like  
**flavor** and **odor**)
- IT Milk preparations  
(yogurt; **flavoring** material with cream-like  
**flavor** and **odor**)
- IT 50-21-5, Lactic acid, biological studies 50-99-7, Dextrose,  
biological studies 57-55-6, Propylene glycol, biological studies

63-42-3, Lactose 64-17-5, Ethanol, biological studies 64-19-7,  
Acetic acid, biological studies 67-03-8, Thiamin hydrochloride  
102-76-1, Triacetin 104-61-0, .gamma.-Nonalactone 107-92-6,  
Butyric acid, biological studies 118-71-8, Maltol 119-84-6  
120-51-4, Benzyl benzoate 121-32-4, Ethyl vanillin  
431-03-8, Diacetyl 705-86-2, .delta.-Decalactone 706-14-9,  
.gamma.-Decalactone 713-95-1, .delta.-Dodecalactone 1310-73-2,  
Sodium hydroxide, biological studies 6728-26-3, trans-2-Hexenal  
9000-07-1, Carrageenan 9000-69-5, Pectin 9002-89-5, Polyvinyl  
alcohol 9005-32-7, Alginic acid 9050-36-6, Maltodextrin  
11138-66-2, Xanthan gum 51555-24-9, Acetoin dimer 420112-02-3,  
Instant gum 420112-03-4, Emulsiya

(**flavoring** material with cream-like **flavor**  
and **odor**)

IT 9005-25-8, Starch, biological studies  
(modified; **flavoring** material with cream-like  
**flavor** and **odor**)

L53 ANSWER 3 OF 20 HCA COPYRIGHT 2003 ACS on STN

137:351948 Food aromatizer with heated milk **fragrance**

and **taste**. Borisenko, E. V. (Russia). Russ. RU 2180791

C1 20020327, No pp. given (Russian). CODEN: RUXXE7. APPLICATION:  
RU 2000-126925 20001027.

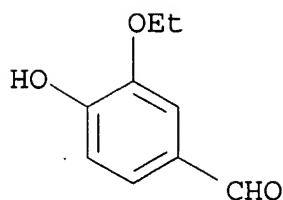
AB The suggested aromatizer contains the following components, wt.%:  
maltol 0.8-1.7, acetoin 0.001-0.035, diacetyl 0.001-0.02,  
ethylbutyrate 0.0009- 0.009, delta-decalactone 0.1-0.18,  
delta-nonalactone 0.0043-0.006, butyric acid 0.09-0.25, caproic acid  
0.01-0.1, acetic acid 0.00035-0.0005, hexenal 0.0005-0.0009,  
anisaldehyde 0.000015-0.000023, capric acid 0.000029-0.000035,  
caprylic acid 0.01-0.025, gamma-dodecalactone 0.05-0.2,  
dihydrocoumarin 0.001-0.0023, dimethylsulfide 0.015-0.027,  
ethylacetate 0.00001-0.00002, ethylpropionate 0.001-0.0025,  
ethylvanillin 0.006-0.008, gamma-decalactone 0.1-0.25,  
gamma-octalactone 0.11-0.35, gamma-undecalactone 0.009- 0.02,  
guaiacol 0.000001-0.000004, isoamyl alc. 0.017-0.03, isobutyric  
aldehyde 0.0000009-0.000002, lactic acid 0.009-0.02, propionic acid  
0.025-0.038, trans-2-capronal 0.0008-0.001, .alpha.-ionone  
0.049-0.061, lemon oil 0.0057-0.007, trans-2,cis-6-nonadienol  
0.0021-0.0035, green cognac oil 0.000001-0.0000035, alkali  
0.000005-0.0000015, thiamin hydrochloride 0.00002-0.00006, solvent  
or solvent emulsifier mixt., or filler, the rest - up to 100.

IT 121-32-4, Ethyl vanillin  
(**food** aromatizer with heated milk **fragrance**  
and **taste**)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)





- IC ICM A23L001-22  
ICS A23L001-226
- CC 17-6 (Food and Feed Chemistry)
- ST **food aroma flavor** additive heated milk; confectionery dairy bakery product **aroma flavor** additive heated milk
- IT Bakery products  
Bread  
Confectionery  
Dairy products  
Emulsifying agents  
Fillers  
    **Flavoring** materials  
    **Food** additives  
Ice cream  
Margarine  
Milk  
Surfactants  
    (**food** aromatizer with heated milk **fragrance** and **taste**)
- IT Alkali metal hydroxides  
Glycoproteins  
    (**food** aromatizer with heated milk **fragrance** and **taste**)
- IT Essential oils  
    (lemon; **food** aromatizer with heated milk **fragrance** and **taste**)
- IT Bakery products  
    (pastries; **food** aromatizer with heated milk **fragrance** and **taste**)
- IT Confectionery  
    (pralines; **food** aromatizer with heated milk **fragrance** and **taste**)
- IT Polysaccharides, biological studies  
    (sulfated; **food** aromatizer with heated milk **fragrance** and **taste**)
- IT 50-21-5, Lactic acid, biological studies 50-99-7, Dextrose, biological studies 57-55-6, Propylene glycol, biological studies 63-42-3, Lactose 64-17-5, Ethanol, biological studies 64-19-7, Acetic acid, biological studies 67-03-8, Thiamin hydrochloride 75-18-3, Dimethyl sulfide 78-84-2, Isobutyric aldehyde 79-09-4, Propionic acid, biological studies 90-05-1, Guaiacol 102-76-1, Triacetin 104-50-7, .gamma.-Octalactone 104-67-6,

.gamma.-Undecalactone 105-37-3, Ethyl propionate 105-54-4, Ethyl butyrate 106-30-9, Ethyl enanthate 107-92-6, Butyric acid, biological studies 118-71-8, Maltol 119-84-6 121-32-4, Ethyl vanillin 123-51-3, Isoamyl alcohol 124-07-2, Caprylic acid, biological studies 127-41-3, .alpha.-Ionone 142-62-1, Caproic acid, biological studies 334-48-5, Capric acid 431-03-8, Diacetyl 513-86-0, Acetoin 705-86-2, .delta.-Decalactone 706-14-9, .gamma.-Decalactone 1335-39-3, Hexenal 2305-05-7, .gamma.-Dodecalactone 3301-94-8, .delta.-Nonalactone 6728-26-3 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9005-25-8D, Starch, modified 9005-32-7D, Alginic acid, water-sol. salts 9050-36-6, Maltodextrin 11138-66-2, Xanthan gum 28069-72-9, trans-2,cis-6-Nonadienol 50984-52-6, Anisaldehyde 420112-02-3, Instant gum 420112-03-4, Emulsiya  
(food aromatizer with heated milk fragrance and taste)

L53 ANSWER 4 OF 20 HCA COPYRIGHT 2003 ACS on STN

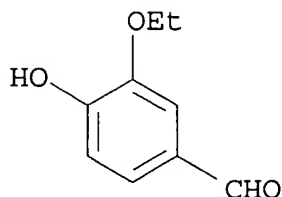
137:309901 **Flavoring** agent with **flavor** and **taste** of concentrated milk. Borisenko, E. V. (Russia). Russ. RU 2180177 C1 20020310, No pp. given (Russian). CODEN: RUXXE7. APPLICATION: RU 2000-126926 20001027.

AB A **flavoring** agent contains: maltol 1.0-2.5, acetoin 0.01-0.05, diacetyl 0.08-0.23, Et butyrate 0.07-0.2, .delta.-decalactone 0.65-0.7, .gamma.-nonalactone 0.1-0.4, butyric acid 0.05-0.25, caproic acid 0.002-0.01, acetic acid 0.012-0.028, hexenal 0.00006-0.00007, anisaldehyde 0.0007-0.0012, capric acid 0.0011-0.002, caprylic acid 0.005-0.006, .delta.-nonalactone 0.21-0.31, .delta.-dodecalactone 0.1-0.6, dihydrocoumarin 0.019-0.025, di-Me sulfide 0.0029-0.0035, Et acetate 0.00055-0.00062, Et propionate 0.002-0.0025, Et vanillin 0.09-0.15, .gamma.-decalactone 0.27-0.33, .gamma.-octalactone 0.00011-0.0002, .gamma.-undecalactone 0.75-0.9, guaiacol 0.00009-0.0002, isoamyl alc. 0.0014-0.0023, isobutyric aldehyde 0.000069-0.000088, lactic acid 0.18-0.25, propionic acid 0.0023-0.0031, green cognac oil 0.0001-0.00017, alkali 0.0002-0.0008, and thiamine hydrochloride 0.001-0.003 wt.% plus solvent or emulsifier-solvent mixt. or filler. The **flavoring** agent imparts a full sweet milk **taste** and a **scent** of natural concd. fat milk to **foods**, which is preserved in acidic **foods** or in **foods** heated to 320.degree..

IT 121-32-4, Ethyl vanillin  
(**flavoring** agent with **flavor** and **taste** of concd. milk)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



- IC ICM A23L001-22  
ICS A23L001-226
- CC 17-6 (Food and Feed Chemistry)
- ST **flavoring** agent milk **flavor**
- IT Glycoproteins  
(emulsifier; **flavoring** agent with **flavor** and **taste** of concd. milk)
- IT Bakery products  
Candy  
Emulsifying agents  
**Flavoring** materials  
**Food** emulsions  
Milk preparations  
(**flavoring** agent with **flavor** and **taste** of concd. milk)
- IT Alkali metal hydroxides  
(**flavoring** agent with **flavor** and **taste** of concd. milk)
- IT Essential oils  
(green cognac; **flavoring** agent with **flavor** and **taste** of concd. milk)
- IT Surfactants  
(nonionic, emulsifier; **flavoring** agent with **flavor** and **taste** of concd. milk)
- IT Polysaccharides, biological studies  
(sulfated, emulsifier; **flavoring** agent with **flavor** and **taste** of concd. milk)
- IT 9000-07-1, Carrageenan 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9005-32-7, Alginic acid  
(emulsifier; **flavoring** agent with **flavor** and **taste** of concd. milk)
- IT 50-21-5, Lactic acid, biological studies 50-99-7, Dextrose, biological studies 63-42-3, Lactose 64-19-7, Acetic acid, biological studies 67-03-8, Thiamine hydrochloride 75-18-3, Dimethyl sulfide 78-84-2, Isobutyric aldehyde 79-09-4, Propionic acid, biological studies 90-05-1, Guaiacol 104-50-7, .gamma.-Octalactone 104-61-0, .gamma.-Nonalactone 104-67-6, .gamma.-Undecalactone 105-37-3, Ethyl propionate 105-54-4, Ethyl butyrate 107-92-6, Butyric acid, biological studies 118-71-8, Maltol 119-84-6 121-32-4, Ethyl vanillin 123-11-5, Anisic aldehyde, biological studies 123-51-3, Isoamyl alcohol 124-07-2, Caprylic acid, biological studies 141-78-6, Ethyl acetate, biological studies 142-62-1, Caproic acid, biological

studies 334-48-5, Capric acid 431-03-8, Diacetyl 513-86-0,  
 Acetoin 705-86-2, .delta.-Decalactone 706-14-9,  
 .gamma.-Decalactone 713-95-1, .delta.-Dodecalactone 1335-39-3,  
 Hexenal 3301-94-8, .delta.-Nonalactone 9005-25-8D, Starch,  
 derivs. 9050-36-6, Maltodextrin 11138-66-2, Xanthan gum  
 420112-02-3, Instant gum 420112-03-4, Emulsiya  
 (**flavoring** agent with **flavor** and  
**taste** of concd. milk)

IT 57-55-6, Propylene glycol, biological studies 64-17-5, Ethyl  
 alcohol, biological studies 102-76-1, Triacetin  
 (solvent contg.; **flavoring** agent with **flavor**  
 and **taste** of concd. milk)

L53 ANSWER 5 OF 20 HCA COPYRIGHT 2003 ACS on STN

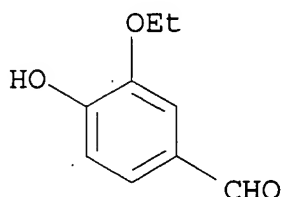
137:32513 Butyrate-containing **flavoring** material with butter  
**taste** and **aroma**. Borisenko, E. V. (Russia).  
 Russ. RU 2170034 C1 20010710, No pp. given (Russian). CODEN:  
 RUXXE7. APPLICATION: RU 2000-125505 20001011.

AB A **flavoring** material contains: butyric acid 1.5-2.5,  
 diacetyl 0.3-0.65, .delta.-decalactone 0.05-0.15, dihydrocoumarin  
 0.25-0.35, Et vanillin 0.5-1.5% by wt. plus solvent or  
 solvent-emulsifier mixt. The **flavoring** material is  
 characterized by improved heat and chem. stability.

IT 121-32-4, Ethyl vanillin  
 (butyrate-contg. **flavoring** material with butter  
**taste** and **aroma**)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A23L001-226

ICS A23C015-00

CC 17-6 (Food and Feed Chemistry)

ST **flavoring** butter butyrate

IT Butter substitutes

Emulsifying agents

**Food** emulsions

Margarine

**Odor** and **Odorous** substances

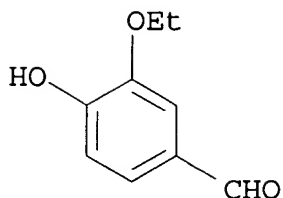
(butyrate-contg. **flavoring** material with butter  
**taste** and **aroma**)

IT Glycoproteins

(butyrate-contg. **flavoring** material with butter  
**taste** and **aroma**)

IT Carboxylic acids, biological studies

- (hydroxy, esters; butyrate-contg. **flavoring** material with butter **taste** and **aroma**)
- IT Surfactants  
(nonionic; butyrate-contg. **flavoring** material with butter **taste** and **aroma**)
- IT Polysaccharides, biological studies  
(sulfated; butyrate-contg. **flavoring** material with butter **taste** and **aroma**)
- IT 50-99-7, Dextrose, biological studies 57-55-6, Propylene glycol, biological studies 63-42-3, Lactose 64-17-5, Ethyl alcohol, biological studies 75-18-3, Dimethyl sulfide 102-76-1, Triacetin 104-50-7, .gamma.-Octalactone 104-61-0, .gamma.-Nonalactone 104-67-6, .gamma.-Undecalactone 107-92-6, Butyric acid, biological studies 119-84-6 120-51-4, Benzyl benzoate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 431-03-8, Diacetyl 706-14-9, .gamma.-Decalactone 9000-01-5, Acacia gum 9000-07-1, Carrageenan 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9004-32-4, Carboxymethylcellulose 9005-32-7, Alginic acid 9005-38-3, Sodium alginate 9050-36-6, Maltodextrin 11138-66-2, Xanthan gum 51555-24-9, Acetoin dimer 104673-41-8, Emulgum 420112-02-3, Instantgum  
(butyrate-contg. **flavoring** material with butter **taste** and **aroma**)
- IT 9005-25-8, Starch, biological studies  
(modified; butyrate-contg. **flavoring** material with butter **taste** and **aroma**)
- L53 ANSWER 6 OF 20 HCA COPYRIGHT 2003 ACS on STN  
136:354499 **Flavor** with **taste** and **aroma** of strawberry. Borisenko, E. V. (Russia). Russ. RU 2165716 C1 20010427, No pp. given. (Russian). CODEN: RUXXE7. APPLICATION: RU 2000-124571 20000927.
- AB A food industry **flavor** with **taste** and **aroma** of strawberry contains at least, mass %: Et butyrate, 0.3-1.5; cis-3-hexenone, 0.8-1.2; Et caproate, 0.2-0.7; furaneol, 0.5-1.5; Et acetate, 0.3-1.0; di-Me sulfate, 0.002-0.01; solvent or mixt. of solvent and emulsifier, or filler, up to 100. Besides, the proposed **flavor** contains a **flavor** intensifier and/or stabilizer, and/or modifier, and/or stabilizer of the aggregation state, or mixt. of said components in various combinations. The **flavor** is stable to high temps. and aggressive media, and keeps **aroma** after heating to 200-300.degree.C.
- IT 121-32-4, Ethyl vanillin  
(**flavor** with **taste** and **aroma** of strawberry)
- RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



- IC ICM A23L001-22
- ICS A23L001-226; A23L001-235; A23L002-56
- CC 17-6 (Food and Feed Chemistry)
- ST **food additive strawberry aroma flavor**  
synthetic
- IT Essential oils  
(bergamot; **flavor with taste and**  
**aroma** of strawberry)
- IT Confectionery  
(caramel; **flavor with taste and aroma**  
of strawberry)
- IT Bakery products  
Confectionery  
Dairy products  
Dough  
Emulsifying agents  
Fillers  
**Flavoring materials**  
**Food additives**  
Milk preparations  
Solvents  
Stabilizing agents  
Strawberry  
(**flavor with taste and aroma** of  
strawberry)
- IT Agglutinins and Lectins  
Aldehydes, biological studies  
Carboxylic acids, biological studies  
Esters, biological studies  
Fats and Glyceridic oils, biological studies  
Glycoproteins  
(**flavor with taste and aroma** of  
strawberry)
- IT Strawberry  
(paste candy; **flavor with taste and**  
**aroma** of strawberry)
- IT Bakery products  
(rolls; **flavor with taste and aroma**  
of strawberry)
- IT **Beverages**  
Ice cream  
(strawberry-flavored; **flavor with**  
**taste and aroma** of strawberry)

- IT Polysaccharides, biological studies  
(sulfated; **flavor** with **taste** and **aroma** of strawberry)
- IT Milk preparations  
(yogurt, strawberry-**flavored**; **flavor** with **taste** and **aroma** of strawberry)
- IT 50-21-5, Lactic acid, biological studies 50-99-7, Dextrose, biological studies 57-55-6, Propylene glycol, biological studies 63-42-3, Lactose 64-17-5, Ethanol, biological studies 64-19-7, Acetic acid, biological studies 75-07-0, Acetaldehyde, biological studies 75-18-3, Dimethyl sulfide 77-83-8, Ethyl methyl phenylglycidate 78-93-3, Methyl ethyl ketone, biological studies 80-71-7, Cyclotene 93-04-9, .beta.-Naphthol methyl ether 97-64-3, Ethyl lactate 100-51-6, Benzyl alcohol, biological studies 100-52-7, Benzaldehyde, biological studies 102-76-1, Triacetin 103-26-4, Methyl cinnamate 104-57-4, Benzyl formate 104-61-0, .gamma.-Nonalactone 104-67-6, .gamma.-Undecalactone 105-54-4, Ethyl butyrate 107-92-6, Butyric acid, biological studies 109-52-4, Valeric acid, biological studies 109-94-4, Ethyl formate 111-27-3, Hexanol, biological studies 118-71-8, Maltol 119-84-6 120-14-9, 3,4-Dimethoxybenzaldehyde 120-51-4, Benzyl benzoate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 123-66-0, Ethyl caproate 123-76-2, Levulinic acid 124-07-2, Octanoic acid, biological studies 127-41-3, .alpha.-Ionone 134-20-3, Methyl anthranilate 141-78-6, Ethyl acetate, biological studies 142-62-1, Hexanoic acid, biological studies 431-03-8, Diacetyl 540-18-1, Amyl butyrate 705-86-2, .delta.-Decalactone 706-14-9, .gamma.-Decalactone 868-57-5, Methyl-2-methylbutyrate 928-96-1, cis-3-Hexenol 1577-18-0, trans-3-Hexenoic acid 3658-77-3, Furaneol 4940-11-8, Ethyl maltol 6728-26-3, trans-2-Hexenal 7452-79-1, Ethyl-2-methylbutyrate 9000-07-1, Carrageenan 9000-69-5, Pectin 9002-89-5, Polyvinyl alcohol 9005-25-8D, Starch, modified 9005-32-7, Alginic acid 9050-36-6, Maltodextrin 11138-66-2, Xanthan gum 16491-36-4, cis-3-Hexenyl butyrate 23726-91-2, .beta.-Damascone 28069-72-9, trans-2-cis-6-Nonadienol 104673-41-8, Emulgum 420111-98-4, Resino gum 420112-02-3, Instant gum 420112-03-4, Emulsiya  
(**flavor** with **taste** and **aroma** of strawberry)

L53 ANSWER 8 OF 20 HCA COPYRIGHT 2003 ACS on STN

135:357120 Ambient-stable tea-based **beverage** preserved with minimal amounts of sorbic or benzoic acid. Blyth, Marian; Kanu, Aminata Yanda; Kirby, Roy Michael; Stratford, Malcolm (Unilever PLC, UK; Unilever N.V.; Hindustan Lever Limited). PCT Int. Appl. WO 2001087095 A1 20011122, 61 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,

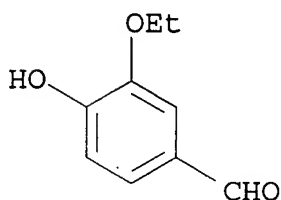
MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-EP4856 20010501. PRIORITY: GB 2000-11676 20000515.

AB A **beverage**, particularly a tea-based **beverage**, contains a preservative system that includes 1-175 ppm cinnamic acid, 10-200 ppm sorbic acid or benzoic acid, and at least one essential oil component other than cinnamic acid. Thus, the antifungal essential oil component may include citral, citral di-Me acetal, cumic alc., etc. Minimizing the concn. of sorbic and benzoic acid in this way enables the prepn. of an ambient-stable **beverage** while avoiding the adverse effects that sorbic and benzoic acid can have on **taste**.

IT 121-32-4, Ethyl vanillin  
(ambient-stable tea-based **beverage** preserved with minimal amts. of sorbic or benzoic acid)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A23L002-44

ICS A23L002-46; A23F003-16; A23F003-40

CC 17-13 (Food and Feed Chemistry)

ST tea **beverage** preservation sorbate benzoate essential oil

IT **Beverages**

Food preservation

Food preservatives

Fungicides

(ambient-stable tea-based **beverage** preserved with minimal amts. of sorbic or benzoic acid)

IT Essential oils

(ambient-stable tea-based **beverage** preserved with minimal amts. of sorbic or benzoic acid)

IT Tea products

(**beverages**; ambient-stable tea-based **beverage** preserved with minimal amts. of sorbic or benzoic acid)

IT Aspergillus niger

Saccharomyces cerevisiae

(control of; ambient-stable tea-based **beverage** preserved with minimal amts. of sorbic or benzoic acid)

IT 65-85-0, Benzoic acid, biological studies 89-82-7, Pulegone

93-15-2, Methyl eugenol 94-18-8, Benzyl-4-hydroxybenzoate

98-53-3, 4-tert-Butylcyclohexanone 99-49-0, Carvone 104-55-2,

Cinnamaldehyde 104-61-0, .gamma.-Nonalactone 104-67-6,

.gamma.-Undecalactone 106-21-8, 3,7-Dimethyl-1-octanol 106-22-9,



Citronellol 110-44-1, Sorbic acid 111-87-5, 1-Octanol, biological studies 112-05-0, Nonanoic acid 112-30-1, Decanol 112-31-2, Decanal 112-42-5, 1-Undecanol 112-44-7, Undecanal 119-36-8, Methyl salicylate 121-32-4, Ethyl vanillin 121-33-5, Vanillin 124-07-2, Caprylic acid, biological studies 134-20-3, Methyl anthranilate 142-83-6, Sorbic aldehyde 326-61-4, Piperonyl acetate 488-10-8, Jasmine 515-00-4, Myrtenol 536-60-7, Cumic alcohol 562-74-3, Terpinen-4-ol 579-07-7, 1-Phenyl-1,2-propanedione 617-35-6, Ethyl pyruvate 621-82-9, Cinnamic acid, biological studies 623-36-9, 2-Methyl-2-pentenal 656-53-1 698-76-0, .delta.-Octalactone 705-86-2, .delta.-Decalactone 1334-78-7, Tolualdehyde 1504-74-1, o-Methoxycinnamaldehyde 1731-84-6, Methyl nonanoate 2315-68-6, Propyl benzoate 3623-51-6, Neomenthol 4441-63-8, Cyclohexanecarboxylic acid 5392-40-5, Citral 7549-37-3, Citral dimethyl acetal 10094-36-7, Ethylcyclohexanecarboxylate 15174-47-7, .alpha.-Methyl-trans-cinnamaldehyde 21722-83-8, 2-Cyclohexylethyl acetate 21834-92-4, 5-Methyl-2-phenyl-2-hexenal 25152-84-5, trans,trans-2,4-Decadienal 38049-26-2, Dihydrocarveol (ambient-stable tea-based beverage preserved with minimal amts. of sorbic or benzoic acid)

L53 ANSWER 12 OF 20 HCA COPYRIGHT 2003 ACS on STN

130:138600 **Flavor** enhancement process. Schur, Henry B. (USA).

PCT Int. Appl. WO 9902046 A1 19990121, 36 pp.

DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1998-US14116 19980708.

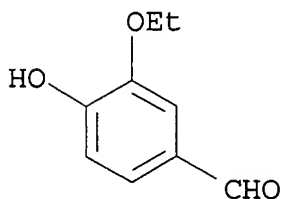
PRIORITY: US 1997-889723 19970708.

AB The invention relates to the modification of **flavorants** by reaction of mers in the presence of **flavorants** to form products having significantly increased mol. wt.

IT 121-32-4, Ethyl vanillin  
(**flavor** enhancement process by mol. wt.-increasing addns. to **flavorants**)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A23L001-22

ICS A23L002-56; A23L001-221; A23P001-00; A23J001-09; A61K009-14;  
B01J013-00

CC 17-6 (Food and Feed Chemistry)  
Section cross-reference(s): 5, 63

ST **flavorant** enhancement food

IT Aromatic compounds  
(alkenyl; **flavor** enhancement process by mol.  
wt.-increasing addns. to **flavorants**)

IT Coagulants  
Coupling agents  
Crosslinking agents  
Drugs  
    **Flavoring** materials  
    **Food** gels  
Pesticides  
Polymerization  
(**flavor** enhancement process by mol. wt.-increasing  
addns. to **flavorants**)

IT Alcohols, biological studies  
Aldehydes, biological studies  
Ketones, biological studies  
(**flavor** enhancement process by mol. wt.-increasing  
addns. to **flavorants**)

IT Acrylic polymers, biological studies  
Amides, biological studies  
Peroxysulfates  
Terpenes, biological studies  
(**flavor** enhancement process by mol. wt.-increasing  
addns. to **flavorants**)

IT Hydroxy compounds  
(polyhydroxy compds.; **flavor** enhancement process by  
mol. wt.-increasing addns. to **flavorants**)

IT 50-99-7, D-Glucose, biological studies 75-07-0, Acetaldehyde,  
biological studies 75-35-4, Vinylidene chloride, biological  
studies 78-79-5, Isoprene, biological studies 78-93-3, Methyl  
ethyl ketone, biological studies 79-06-1, 2-Propenamide,  
biological studies 79-06-1D, Acrylamide, derivs. 89-74-7,  
2,4-Dimethylacetophenone 89-80-5, Menthone 89-81-6, Piperitone  
89-82-7, Pulegone 97-53-0, Eugenol 97-65-4, biological studies  
97-90-5 97-96-1, 2-Ethyl butyraldehyde 99-48-9, Carveol  
100-06-1 100-42-5, biological studies 100-43-6, 4-Vinyl pyridine  
100-51-6, Benzyl alcohol, biological studies 100-52-7,  
Benzaldehyde, biological studies 100-69-6, 2-Vinyl pyridine  
100-80-1, m-Methylstyrene 102-04-5, 1,3-Diphenyl-2-propanone  
104-54-1, Cinnamyl alcohol 104-55-2, Cinnamic aldehyde 105-13-5,  
Anisic alcohol 106-21-8, Tetrahydrogeraniol 106-22-9,  
Citronellol 106-23-0, Citronellal 106-26-3, .beta.-Citral  
106-35-4, Ethyl butyl ketone 106-68-3, Ethyl amyl ketone  
106-72-9, 2,6-Dimethyl-5-heptenal 106-99-0, 1,3-Butadiene,  
biological studies 107-13-1, 2-Propenenitrile, biological studies  
108-05-4, Acetic acid ethenyl ester, biological studies 110-26-9  
110-43-0, Methyl amyl ketone 110-62-3, Valeraldehyde 111-13-7,

Methyl hexyl ketone 112-30-1, Decanol 112-31-2, Decanal 112-54-9, Dodecanal 119-61-9, Benzophenone, biological studies 120-14-9, Veratraldehyde 120-57-0, Piperonal 121-32-4, Ethyl vanillin 121-33-5, Vanillin 122-40-7, .alpha.-Amyl cinnamaldehyde 122-48-5, Zingerone 123-11-5, Anisic aldehyde, biological studies 123-19-3, Dipropyl ketone 123-72-8, Butyraldehyde 124-13-0, Octaldehyde 124-19-6, Nonanal 126-99-8, Chloroprene 127-17-3, Pyruvic acid, biological studies 127-51-5, .alpha.-Isomethylionone 141-27-5, .alpha.-Citral 431-03-8, Diacetyl 499-75-2, Carvacrol 536-59-4, p-Mentha-1,8-dien-7-ol 611-15-4, o-Methylstyrene 622-97-9, p-Methylstyrene 818-61-1 821-55-6, 2-Nonanone 868-77-9 923-26-2 999-61-1 1121-55-7, 3-Vinyl pyridine 1187-59-3, n-Methylacrylamide 1189-08-8, 1,3-Butylene dimethacrylate 1321-74-0, Divinyl benzene, biological studies 1334-78-7, Tolyaldehyde 1398-61-4, Chitin 1746-23-2, p-Tert-Butyl styrene 2039-87-4, o-Chlorostyrene 2082-81-7 2244-16-8 2274-11-5, Ethylene glycol diacrylate 2351-43-1, Diethylene glycol monomethacrylate 2761-08-2, 3-Hydroxypropyl acrylate 2761-09-3, 3-Hydroxypropyl methacrylate 3887-02-3, n-Methyl methacrylamide 4826-62-4, 2-Dodecenal 5238-56-2, n-(2-Hydroxyethyl methacrylamide) 5948-04-9, Dihydrocarvone 6485-40-1, L-Carvone 6728-26-3, trans-2-Hexenal 7559-82-2, Propylene glycol dimethacrylate 7585-39-9, .beta.-Cyclodextrin 7646-67-5, N-(2-Hydroxyethyl acrylamide) 7779-07-9, 2,6-Dimethyloctanal 7779-75-1, Isobutyl acetoacetate 9002-18-0, Agar 9002-89-5, Polyvinyl alcohol 9003-20-7, Polyvinyl acetate 9003-39-8, Polyvinylpyrrolidone 9004-32-4 9004-34-6, Cellulose, biological studies 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-67-5, Methyl cellulose 9005-25-8, Starch, biological studies 9005-27-0, Hydroxyethyl starch 9005-38-3, Algin 9005-79-2, Glycogen, biological studies 9005-82-7, Amylose 9012-76-4, Chitosan 9037-22-3, Amylopectin 11050-62-7, Isojasmone 12619-70-4, Cyclodextrin 13749-61-6, n-Isopropyl methacrylamide 25151-33-1, Propylene glycol diacrylate 25447-70-5, Decenal 25496-15-5 25497-27-2, p-Cymenol 28106-30-1, Ethyl styrene 30030-25-2 37189-22-3, Methyl starch 38049-26-2, Dihydrocarveol 64111-89-3 125045-79-6  
(flavor enhancement process by mol. wt.-increasing addns. to flavorants)

L53 ANSWER 13 OF 20 HCA COPYRIGHT 2003 ACS on STN

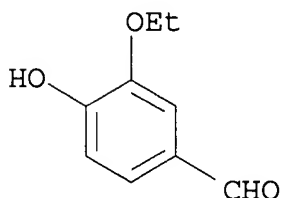
128:179715 Food containing horseradish flavor.

Iwahata, Shinichi; Noguchi, Masahiro; Ito, Yumiko (House Food Industrial Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10042826 A2 19980217 Heisei, 6 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1996-201662 19960731.

AB A flavoring compn. is prepd. contg. (1) .gtoreq. 1 flavor selected from the group comprising benzaldehyde, cumin aldehyde, perillaldehyde, cumin alc., .gamma.-undecalactone, iso-Pr formate, anisaldehyde, anethol, estragol, vanillin, and Et vanillin, and (2) RN=C=S [ R = C1-6 alkyl, aryl, Ph contg. C1-6

alkyl substituents, and benzyl]. The (1) **flavor** may be selected exts. from bitter almond, apricot, cumin, shiso, peach, orange, plum, apple, vanilla, anise, fennel, and tarragon.

IT 121-32-4, Ethyl vanillin  
(**food** contg. horseradish **flavor** with)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

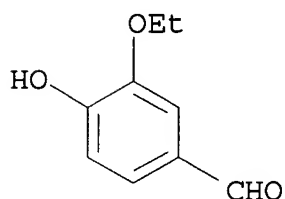


IC ICM A23L001-226  
ICS A23L001-226; A23L001-221; A23L001-222  
CC 17-6 (Food and Feed Chemistry)  
ST horseradish **flavor** food  
IT Vanilla  
(ext.; **food** contg. horseradish **flavor**)  
IT **Flavor**  
Horseradish (*Armoracia lapathifolia*)  
(**food** contg. horseradish **flavor**)  
IT Almond (*Prunus amygdalus*)  
Anise  
Apple  
Apricot (*Prunus armeniaca*)  
Cumin  
Fennel (*Foeniculum vulgare*)  
Orange  
Peach (*Prunus persica*)  
Perilla frutescens  
Plum  
Tarragon (*Artemisia dracunculus*)  
(**food** contg. horseradish **flavor** with ext. of)  
IT 100-52-7, Benzaldehyde, biological studies 104-46-1, Anethol  
104-67-6, .gamma.-Undecalactone 121-32-4, Ethyl vanillin  
121-33-5, Vanillin 122-03-2, Cuminaldehyde 140-67-0, Estragol  
536-60-7, Cuminalcohol 625-55-8, Isopropyl formate 2111-75-3,  
Perillaldehyde 50984-52-6, Anisaldehyde  
(**food** contg. horseradish **flavor** with)

L53 ANSWER 14 OF 20 HCA COPYRIGHT 2003 ACS on STN  
128:127312 **Flavor** delivery system for producing a microcapsule  
**flavor**. Merchant, Zohar Mohamed; Gaonkar, Anilkumar  
Ganapati; Nicholson, Vikki Jeannine; Tufts, Helen Marion (Kraft  
Foods, Inc., USA). Eur. Pat. Appl. EP 815743 A2 19980107,  
10 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR,  
IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI. (English). CODEN:  
EPXXDW. APPLICATION: EP 1997-304326 19970619. PRIORITY: US

1996-670542 19960627.

- AB To produce a microcapsule **flavor** delivery system., a mixt. of a **flavoring** material selected from the group consisting of an oil-sol. **flavor** dissolved in an oil, a water-sol. **flavor** or a combination of the two, and a protein soln. is used. The mixt. is subjected to low-shear mixing to provide an O/W pre-emulsion or a W/O/W multiple emulsion. The pre-emulsion or multiple emulsion is subjected to high-shear mixing or sonication to provide either an O/W emulsion having a coating of protein around the oil droplets or a W/O/W multiple emulsion having a coating of protein around the W/O droplets, resp. The microcapsule **flavor** delivery system is incorporated into a **food** product to improve the **flavor** perception. Thus, encapsulated aromatized coffee oil protein microcapsules are obtained by using egg white and sonication.
- IT 121-32-4, Ethyl vanillin  
(**flavor** delivery system for producing microcapsule **flavor**)
- RN 121-32-4 HCA
- CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



- IC ICM A23L001-22
- CC 17-4 (Food and Feed Chemistry)
- ST **flavor** microencapsulation emulsification
- IT Fats and Glyceridic oils, biological studies  
(butter; **flavor** delivery system for producing microcapsule **flavor**)
- IT Cheese  
(cheese substitutes; **flavor** delivery system for producing microcapsule **flavor**)
- IT Fats and Glyceridic oils, biological studies  
(coffee; **flavor** delivery system for producing microcapsule **flavor**)
- IT **Flavor**  
**Flavoring** materials  
(delivery system for producing microcapsule **flavor**)
- IT Fats and Glyceridic oils, biological studies  
(fish; **flavor** delivery system for producing microcapsule **flavor**)
- IT Cavitation  
Egg white  
Emulsification  
**Food** emulsions  
Frozen desserts

Mayonnaise  
 Sonication  
 Vanilla  
     (**flavor** delivery system for producing microcapsule  
     **flavor**)

IT Fats and Glyceridic oils, biological studies  
 Gelatins, biological studies  
 Lactalbumins  
 Ovalbumin  
 Proteins, general, biological studies  
 Soybean oil  
     (**flavor** delivery system for producing microcapsule  
     **flavor**)

IT Mixing  
     (high-shear; **flavor** delivery system for producing  
     microcapsule **flavor**)

IT Pressure  
     (high; **flavor** delivery system for producing  
     microcapsule **flavor**)

IT Glycerides, biological studies  
     (medium-chain, Neobee; **flavor** delivery system for  
     producing microcapsule **flavor**)

IT Encapsulation  
     (microencapsulation; **flavor** delivery system for  
     producing microcapsule **flavor**)

IT Fluidization  
     (microfluidization; **flavor** delivery system for  
     producing microcapsule **flavor**)

IT Albumins, biological studies  
     (serum, bovine; **flavor** delivery system for producing  
     microcapsule **flavor**)

IT Fats and Glyceridic oils, biological studies  
     (vegetable; **flavor** delivery system for producing  
     microcapsule **flavor**)

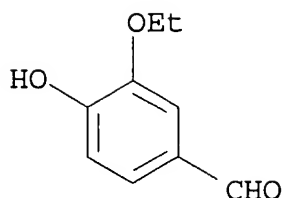
IT 121-32-4, Ethyl vanillin 121-33-5, Vanillin 9005-25-8,  
 Starch, biological studies 9005-32-7, Alginic acid 71010-52-1,  
 Gellan gum  
     (**flavor** delivery system for producing microcapsule  
     **flavor**)

L53 ANSWER 19 OF 20 HCA COPYRIGHT 2003 ACS on STN  
 71:2311 **Food essence** with vanilla **flavor**.  
 Zenon, Ryszard; Sarzynski, Wiktor (Instytut Przemyslu Drobneho i  
 Rzemiosla). Pol. PL 54771 19680228, 2 pp. (Polish).  
 CODEN: POXXA7. APPLICATION: PL 19651106.

AB A mixt. consisting of 57 parts by wt. vanillin and 43 parts by wt.  
 ethylvanillin is fused at .apprx.80.degree. and the eutectic  
 dissolved (after cooling) in aq. alc.

IT 121-32-4  
     (**flavoring** material from vanillin and)

RN 121-32-4 HCA  
 CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC A231  
CC 17 (Foods)  
ST vanilla **flavoring**; **flavoring** vanilla;  
ethylvanillin vanillin  
IT 121-33-5  
(**flavoring** material from ethylvanillin and)  
IT 121-32-4  
(**flavoring** material from vanillin and)

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L65 ANSWER 1 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations

L65 ANSWER 2 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Compositions for oral cavity application containing glucanase,  
anionic surfactants, and odor masking agents

L65 ANSWER 3 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations

L65 ANSWER 4 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations including  
tableted center

L65 ANSWER 5 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations including  
tableted center

L65 ANSWER 6 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Over-coated **chewing gum** formulations

L65 ANSWER 7 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI **Dentifrices** containing bitter glycosides and N-substituted  
p-menthane-3-carboxamides

L65 ANSWER 8 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI 4-(1-Menthoxymethyl)-2-phenyl-1,3-dioxolane or its derivatives and  
flavor composition containing them

L65 ANSWER 9 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Vanillin as stabilizer for cetylpyridinium and **dentifrices**

containing them

- L65 ANSWER 10 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI **Dentifrices** containing abrasive granules
- L65 ANSWER 11 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI **Chewing gum** containing aspartic acid-derived sweetener and its stabilization
- L65 ANSWER 12 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Vanilla flavors for food processing. IV. Utilities of vanilla components in several foods
- L65 ANSWER 13 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Rapid analysis of food additives by the TAS process
- L65 ANSWER 14 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Determination of vanillin and bourbonal in sweetmeats by a spectrophotometric method
- L65 ANSWER 15 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Morpholin-3-ones and 4-hydroxy-3-alkoxybenzaldehyde flavor complexes
- L65 ANSWER 16 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Determination of coumarin, ethyl vanillin, and vanillin in food products
- L65 ANSWER 17 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Physical and chemical characteristics of flavors used in the sweets industry. II
- L65 ANSWER 18 OF 18 HCA COPYRIGHT 2003 ACS on STN  
TI Vanilla extracts and imitations: Determination of coumarin, ethyl vanillin, and vanillin in food products

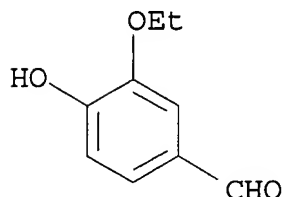
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- L65 ANSWER 1 OF 18 HCA COPYRIGHT 2003 ACS on STN  
138:243278 Over-coated **chewing gum** formulations.  
Ream, Ronald L.; Greenberg, Michael J.; Wokas, William J.; Corriveau, Christine L. (USA). U.S. Pat. Appl. Publ. US 2003049208 A1 20030313, 20 pp., Cont.-in-part of U.S. 6,355,265. (English). CODEN: USXXCO. APPLICATION: US 2001-992122 20011113. PRIORITY: US 1999-286818 19990406; WO 1999-US29742 19991214; US 2000-510878 20000223.
- AB A method for delivering a medicament or agent to an individual using a **chewing gum**-like product, specifically a coated gum-like product is provided. The medicament or agent is present within the coating that surrounds a center comprising a gum base. By chewing the product, the medicament or agent is released from the product. Continuing to chew the product creates a pressure



within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa contained in the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. For example, an acetaminophen coated product contained (a) gum base center (1 g), and (b) coating (1 g) made of acetaminophen 80.0 g, encapsulated aspartame 20.0 g, aspartame 50.0 g, salt flour 2.5 g, dextrose 643.5 g, and flavor 4.0 g.

IT 121-32-4, Ethyl vanillin  
(over-coated **chewing gum** formulations with enhanced drug absorption and bioavailability)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K009-68  
ICS A61K038-28; A61K031-56  
NCL 424048000; 514003000; 514179000  
CC 63-6 (Pharmaceuticals)  
Section cross-reference(s): 1  
ST **chewing gum** coating drug absorption bioavailability.  
IT Drug delivery systems  
(**chewing gums**; over-coated **chewing gum** formulations with enhanced drug absorption and bioavailability)  
IT Natural products, pharmaceutical  
(licorice; over-coated **chewing gum** formulations with enhanced drug absorption and bioavailability)  
IT Taste  
(masking agents; over-coated **chewing gum** formulations with enhanced drug absorption and bioavailability)  
IT Mouth  
(mucosa, absorption by; over-coated **chewing gum** formulations with enhanced drug absorption and bioavailability)  
IT Contraceptives  
Vaccines  
(oral; over-coated **chewing gum** formulations with enhanced drug absorption and bioavailability)  
IT Analgesics  
Anesthetics  
Antacids  
Anti-inflammatory agents  
Antibiotics

Antihistamines  
 Antimicrobial agents  
 Antitumor agents  
 Antitussives  
 Antiviral agents  
 Cardiovascular agents  
 Cognition enhancers  
 Decongestants  
 Diuretics  
 Drug bioavailability  
 Fungicides  
 Human  
 Muscle relaxants  
 Psychotropics  
 Sweetening agents  
 (over-coated **chewing gum** formulations with  
 enhanced drug absorption and bioavailability)  
 IT Hormones, animal, biological studies  
 Mineral elements, biological studies  
 Vitamins  
 (over-coated **chewing gum** formulations with  
 enhanced drug absorption and bioavailability)  
 IT Essential oils  
 (peppermint; over-coated **chewing gum**  
 formulations with enhanced drug absorption and bioavailability)  
 IT Intestinal bacteria  
 (probiotic; over-coated **chewing gum**  
 formulations with enhanced drug absorption and bioavailability)  
 IT Diet  
 (supplements; over-coated **chewing gum**  
 formulations with enhanced drug absorption and bioavailability)  
 IT Biological transport  
 (uptake; over-coated **chewing gum** formulations  
 with enhanced drug absorption and bioavailability)  
 IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological  
 studies 57-48-7, D-Fructose, biological studies 81-07-2,  
 Saccharin 87-99-0, Xylitol 90-80-2, Glucono .delta.-lactone  
 121-32-4, Ethyl vanillin 121-33-5, Vanillin 527-07-1,  
 Sodium gluconate 585-88-6, Maltitol 1405-86-3, Glycyrrhizin  
 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 22839-47-0,  
 Aspartame 55589-62-3, Acesulfame-k 56038-13-2, Sucralose  
 64519-82-0, Isomalt  
 (over-coated **chewing gum** formulations with  
 enhanced drug absorption and bioavailability)  
 IT 58-08-2, Caffeine, biological studies  
 (over-coated **chewing gum** formulations with  
 enhanced drug absorption and bioavailability)  
 IT 90-82-4, Pseudoephedrine 103-90-2, Acetaminophen 9004-10-8,  
 Insulin, biological studies  
 (over-coated **chewing gum** formulations with  
 enhanced drug absorption and bioavailability)

L65 ANSWER 3 OF 18 HCA COPYRIGHT 2003 ACS on STN

137:329468 Over-coated **chewing gum** formulations.

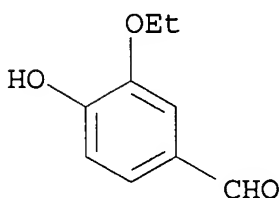
Ream, Ronald L.; Greenberg, Michael J.; Wokas, William J.;  
Corriveau, Christine L. (USA). U.S. Pat. Appl. Publ. US 2002159956  
A1 20021031, 21 pp., Cont.-in-part of U.S. 6,355,265. (English).  
CODEN: USXXCO. APPLICATION: US 2001-990628 20011113. PRIORITY: US  
1999-286818 19990406; WO 1999-US29742 19991214; US 2000-510878  
20000223.

AB Methods and products for improved delivery of a medicament or agent to an individual using a **chewing gum** formulation are provided. The medicament or agent is present within the coating that surrounds a gum center (the water sol. portion and a water insol. base portion). By **chewing the gum**, the medicament or agent is released from the product. Continuing to chew the **chewing gum** creates a pressure within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa of the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. For example, a randomized, single-dose, two-way crossover study was conducted in humans after administering a single 100 mg dose of caffeine in **chewing gum** after an overnight fast. The test treatment was two 50 mg caffeine **chewing gum** pieces (sticks), which were chewed for 15 min and removed. The ref. treatment was one 100 mg chewable No-Doz tablet, which was chewed and swallowed. The caffeine **chewing gum** pieces appear to have a much faster rate of absorption than the No-Doz chewable tablets. The areas and peak concns. of the **chewing gum** were less than half that of No-Doz even though the gum base released one-half the caffeine that the tablet did. And the time to reach a peak for the gum was 30 min earlier than for the tablet.

IT 121-32-4, Ethyl vanillin  
(over-coated **chewing gum** formulations with improved drug bioavailability)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K009-68

NCL 424048000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

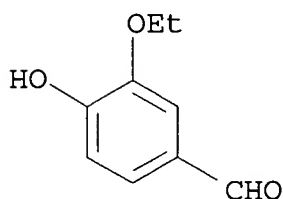
ST **chewing gum** drug coating bioavailability

IT Drug delivery systems

- (**chewing gums**; over-coated **chewing gum** formulations with improved drug bioavailability)
- IT Natural products, pharmaceutical  
(licorice, root exts., spray dried; over-coated **chewing gum** formulations with improved drug bioavailability)
- IT Analgesics  
Antacids  
Anti-inflammatory agents  
Antibiotics  
Antihistamines  
Antiviral agents  
Cardiovascular agents  
Decongestants  
Drug bioavailability  
Muscle relaxants  
Psychotropics  
Sweetening agents  
(over-coated **chewing gum** formulations with improved drug bioavailability)
- IT Mineral elements, biological studies  
Vitamins  
(over-coated **chewing gum** formulations with improved drug bioavailability)
- IT Human  
(over-coated **chewing gum** formulations with improved drug bioavailability in humans)
- IT 58-08-2, Caffeine, biological studies  
(over-coated **chewing gum** formulations with improved drug bioavailability)
- IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2, Glucono-.delta.-lactone 90-82-4, Pseudoephedrine 103-90-2, Acetaminophen 121-32-4, Ethyl vanillin 121-33-5, Vanillin 527-07-1, Sodium gluconate 585-88-6, Maltitol 1405-86-3 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 9004-10-8, Insulin, biological studies 22839-47-0, Aspartame 55589-62-3, Acesulfame-k 56038-13-2, Sucralose 64519-82-0, Isomalt  
(over-coated **chewing gum** formulations with improved drug bioavailability)
- L65 ANSWER 4 OF 18 HCA COPYRIGHT 2003 ACS on STN  
135:376795 Over-coated **chewing gum** formulations including tableted center. Ream, Ronald L.; Corriveau, Christine L.; Graff, Gwendolyn; Matulewicz, Leonard (Wm. Wrigley Jr. Company, USA). U.S. US 6322806 B1 20011127, 22 pp., Cont.-in-part of U.S. Ser. No. 510,878. (English). CODEN: USXXAM. APPLICATION: US 2000-618808 20000718. PRIORITY: US 1999-286818 19990406; WO 1999-US29742 19991214; US 2000-510878 20000223.
- AB Methods and products for delivering a medicament or agent to an individual are provided as well as methods for producing the product. The product includes a coating having a medicament or

agent. The medicament or agent is present within the coating that surrounds a tableted gum center (the water-sol. portion and a water-insol. base portion). By **chewing** the **gum**, the medicament or agent is released from the product. Continuing to chew the **chewing gum** creates a pressure within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa contained in the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. Acetaminophen-coated **chewing gums** included (1) a gum center (1g) contg. gum base 400, corn syrup 91, glycerin 49, sugar 829.9, red dye 0.7, aspartame 14, and bubble gum flavor 15.4 parts and (2) a coating (1 g) contg. acetaminophen 80, encapsulated aspartame 20, aspartame 50, salt flavor 2.5, dextrose 643.5, and bubble gum flavor 4 parts.

IT 121-32-4, Ethyl vanillin  
(over-coated **chewing gums** including tableted center for improved drug delivery)  
RN 121-32-4 HCA  
CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K009-68  
ICS A61K009-20  
NCL 424440000  
CC 63-6 (Pharmaceuticals)  
ST **chewing gum** coating drug bioavailability;  
acetaminophen coated **chewing gum**  
IT Drug delivery systems  
(**chewing gums**; over-coated **chewing gums** including tableted center for improved drug delivery)  
IT Natural products, pharmaceutical  
(licorice; over-coated **chewing gums** including tableted center for improved drug delivery)  
IT Analgesics  
Antacids  
Anti-inflammatory agents  
Antibiotics  
Antihistamines  
Antiviral agents  
Cardiovascular agents  
Decongestants  
Drug bioavailability  
Muscle relaxants

## Psychotropics

(over-coated **chewing gums** including tableted center for improved drug delivery)

IT Minerals, biological studies

## Vitamins

(over-coated **chewing gums** including tableted center for improved drug delivery)

IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2, Glucono .delta.-lactone 90-82-4, Pseudoephedrine 103-90-2, Acetaminophen 121-32-4, Ethyl vanillin 121-33-5, Vanillin 527-07-1, Sodium gluconate 585-88-6, Maltitol 1405-86-3, Glycyrrhizin 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 9004-10-8, Insulin, biological studies 22839-47-0, Aspartame 55589-62-3, Acesulfame-k 56038-13-2, Sucralose 64519-82-0, Isomalt

(over-coated **chewing gums** including tableted center for improved drug delivery)

L65 ANSWER 5 OF 18 HCA COPYRIGHT 2003 ACS on STN

135:24711 Over-coated **chewing gum** formulations

including tableted center. Ream, Ronald L.; Corriveau, Christine L.; Graff, Gwendolyn; Matulewicz, Leonard (USA). U.S. Pat. Appl. Publ. US 20010002998 A1 20010607, 22 pp., Division of U.S. Ser. No. 618,808. (English). CODEN: USXXCO. APPLICATION: US 2001-759838 20010111. PRIORITY: US 2000-618808 20000718.

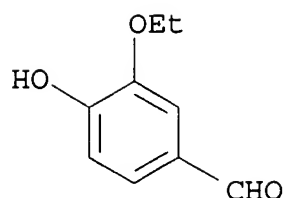
AB Methods and products for delivering a medicament or agent to an individual are provided as well as methods for producing the product. The product includes a coating having a medicament or agent. The medicament or agent is present within the coating that surrounds a tableted gum center (the water sol. portion and a water insol. base portion). By **chewing** the **gum**, the medicament or agent is released from the product. Continuing to chew the **chewing gum** creates a pressure within the buccal cavity forcing the agent or medicament directly into the systemic system of the individual through the oral mucosa contained in the buccal cavity. This greatly enhances the absorption of the drug into the systemic system as well as the bioavailability of the drug within the system. A formulation contained in the gum center gum base 33.00, Ca carbonate 13.00, sorbitol 44.23, glycerin 4.00, flavors 2.32, encapsulated caffeine 1.50, free caffeine 0.45, lecithin 0.60, and encapsulated sweeteners 0.90%. A coating compn. is also given.

IT 121-32-4, Ethylvanillin

(over-coated **chewing gum** formulations including tableted center)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K009-68  
 ICS A61K009-36  
 NCL 424441000  
 CC 63-6 (Pharmaceuticals)  
 ST **chewing gum** tableted center  
 IT Drug delivery systems  
     (**chewing gums**; over-coated **chewing**  
     **gum** formulations including tableted center)  
 IT Analgesics  
     Antacids  
     Anti-inflammatory agents  
     Antibiotics  
     Antihistamines  
     Antiviral agents  
     Cardiovascular agents  
     Decongestants  
     Licorice (Glycyrrhiza)  
     Muscle relaxants  
     Psychotropics  
     Sweetening agents  
         (over-coated **chewing gum** formulations  
         including tableted center)  
 IT Shellac  
     (over-coated **chewing gum** formulations  
     including tableted center)  
 IT Minerals, biological studies  
     Vitamins  
         (over-coated **chewing gum** formulations  
         including tableted center)  
 IT Drug delivery systems  
     (tablets; over-coated **chewing gum**  
     formulations including tableted center)  
 IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological  
     studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin  
     87-99-0, Xylitol 90-80-2, Glucono-.delta.-lactone **121-32-4**  
     , Ethylvanillin 121-33-5, Vanillin 527-07-1, Sodium gluconate  
     585-88-6, Maltitol 3420-59-5, Isomaltol 4468-02-4, Zinc  
     gluconate 4940-11-8, Ethyl maltol 22839-47-0, Aspartame  
     55589-62-3, Acesulfame k 56038-13-2, Sucralose  
         (over-coated **chewing gum** formulations  
         including tableted center)  
 IT 58-08-2, Caffeine, biological studies 9004-10-8, Insulin,  
     biological studies

(over-coated **chewing gum** formulations  
including tableted center)

L65 ANSWER 6 OF 18 HCA COPYRIGHT 2003 ACS on STN

133:286504 Over-coated **chewing gum** formulations.

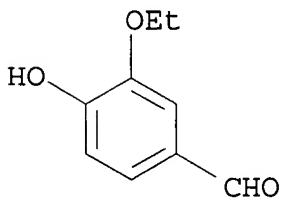
Ream, Ronald L.; Greenberg, Michael J.; Wokas, William J.;  
Corriveau, Christine L. (Wm. Wrigley Jr. Company, USA). PCT Int.  
Appl. WO 2000059543 A1 20001012, 55 pp. DESIGNATED STATES: W: AE,  
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ,  
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,  
IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,  
TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,  
RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES,  
FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD,  
TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US8046  
20000324. PRIORITY: US 1999-286818 19990406; US 2000-510878  
20000223.

AB The product includes a coating having a medicament or agent. The  
medicament or agent is present within the coating that surrounds a  
gum center (the water sol. portion and a water insol. base portion).  
By **chewing the gum**, the medicament or agent is  
released from the product. Continuing to chew the **chewing  
gum** creates a pressure within the buccal cavity forcing the  
agent or medicament directly into the systemic system of the  
individual through the oral mucosa contained in the buccal cavity.  
This greatly enhances the absorption of the drug into the systemic  
system as well as the bioavailability of the drug within the system.  
A gum center (1 g) was coated with 1 g of a compn. contg.  
acetaminophen 80.0, encapsulated aspartame 20.0, aspartame 50.0,  
salt flour 2.5, dextrose 643.5, and bubble gum flavor 4.0 g.

IT 121-32-4, Ethylvanillin  
(over-coated **chewing gum** formulations)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K047-00

ICS A61K009-68; A61K009-28

CC 63-6 (Pharmaceuticals)

ST **chewing gum** coated drug delivery

IT Drug delivery systems

(**chewing gums**; over-coated **chewing  
gum** formulations)

IT Natural products, pharmaceutical



(licorice, spray-dried; over-coated **chewing gum** formulations)

- IT Analgesics
- Antacids
- Anti-inflammatory agents
- Antibiotics
- Antihistamines
- Antiviral agents
- Cardiovascular agents
- Decongestants
- Muscle relaxants
- Psychotropics
- Sweetening agents
- (over-coated **chewing gum** formulations)
- IT Minerals, biological studies
- Vitamins
- (over-coated **chewing gum** formulations)
- IT 50-99-7, Dextrose, biological studies 56-40-6, Glycine, biological studies 57-48-7, Fructose, biological studies 81-07-2, Saccharin 87-99-0, Xylitol 90-80-2, .delta.-Gluconolactone 121-32-4, Ethylvanillin 121-33-5, Vanillin 527-07-1, Sodium gluconate 585-88-6, Maltitol 1405-86-3, Glycyrrhizin 4468-02-4, Zinc gluconate 4940-11-8, Ethyl maltol 22839-47-0, Aspartame 55589-62-3, Acesulfame potassium 56038-13-2, Sucralose 64519-82-0, Isomalt
- (over-coated **chewing gum** formulations)
- IT 103-90-2, Acetaminophen
- (over-coated **chewing gum** formulations)
- IT 9004-10-8, Insulin, biological studies
- (over-coated **chewing gum** formulations)

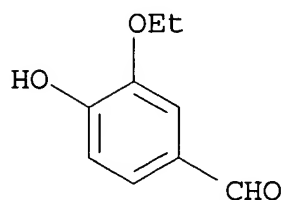
L65 ANSWER 10 OF 18 HCA COPYRIGHT 2003 ACS on STN

117:118244 **Dentifrices** containing abrasive granules. Hirose, Kazuko; Maeda, Kouji; Arai, Kenichi; Inoue, Takeshi (Kao Corp., Japan). Eur. Pat. Appl. EP 473171 A1 19920304, 15 pp. DESIGNATED STATES: R: DE, ES, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1991-114582 19910829. PRIORITY: JP 1990-229876 19900831; JP 1990-407182 19901210.

AB A **dentifrice** comprises (1) an easily breakable granules of abrasives, (2) menthol, and (3) flavoring components. The granules keep their shape in the compn., but are deformed or broken when the compn. is used in the mouth. The compn. exhibits a greatly reduced powdery feeling and gives a pleasant feeling to users. An aq. slurry contg. zeolite, silica, and Mg aluminate metasilicate was spray-dried for granulation. A **dentifrice** contained the obtained granules 15.0, glycerin 10.0, sorbitol 30.0, carrageenan 2.0, Na lauryl sulfate 1.2, Na saccharin 0.1, methylparaben 0.1, a flavoring compn. (contg. peppermint oil, menthol, spearmint oil, carvone, and anethole) 0.8, and purified water to 100.0 %.

- IT 121-32-4, Ethyl vanillin
- (flavoring agent, **dentifrices** contg. abrasive granules and)

RN 121-32-4 HCA  
 CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A61K007-16  
 ICS A61K007-26  
 CC 62-7 (Essential Oils and Cosmetics)  
 ST **dentifrice** abrasive granule flavor  
 IT **Dentifrices**  
 (abrasive granules and naturally occurring flavors in)  
 IT Basil  
 Capsicum  
 Caraway  
 Cardamom  
 Coriander  
 Geranium (horticultural common name)  
 Ginger  
 Hyssop  
 Laurel  
 Lavender  
 Mace (spice)  
 Nutmeg (spice)  
 Osmanthus  
 Rose  
 Rosemary  
 Thyme  
 Vanilla  
 Ylang-ylang  
 (exts., **dentifrices** contg. abrasive granules and, as  
 flavoring agents)  
 IT Mentha arvensis piperascens  
 Lactones  
 (flavoring agents, **dentifrices** contg. abrasive granules  
 and)  
 IT Flavor  
 (plant oils and exts. as, for **dentifrices**)  
 IT Carrot  
 (seed, exts., **dentifrices** contg. abrasive granules and,  
 as flavoring agents)  
 IT Essential oils  
 (caraway, **dentifrices** contg. abrasive granules and, as  
 flavoring agents)  
 IT Essential oils  
 (davana, **dentifrices** contg. abrasive granules and, as  
 flavoring agents)

- IT Essential oils  
(elemi, **dentifrices** contg. abrasive granules and, as  
flavoring agents)
- IT Essential oils  
(geranium, **dentifrices** contg. abrasive granules and, as  
flavoring agents)
- IT Essential oils  
(ginger, **dentifrices** contg. abrasive granules and, as  
flavoring agents)
- IT Perfumes  
(jasmine, exts., **dentifrices** contg. abrasive granules  
and, as flavoring agents)
- IT Fats and Glyceridic oils  
(laurel, **dentifrices** contg. abrasive granules and, as  
flavoring agents)
- IT Resins  
(oleo-, of pepper and ginger, **dentifrices** contg.  
abrasive granules and, as flavoring agents)
- IT Resins  
(oleo-, orris, exts., **dentifrices** contg. abrasive  
granules and, as flavoring agents)
- IT Essential oils  
(peppermint, flavoring agents, **dentifrices** contg.  
abrasive granules and)
- IT Essential oils  
(rosemary, **dentifrices** contg. abrasive granules and, as  
flavoring agents)
- IT Essential oils  
(spearmint, flavoring agents, **dentifrices** contg.  
abrasive granules and)
- IT Essential oils  
(thyme, *Thymus vulgaris*, **dentifrices** contg. abrasive  
granules and, as flavoring agents)
- IT Lavender  
(*L. hybrida*, exts., **dentifrices** contg. abrasive  
granules and, as flavoring agents)
- IT Essential oils  
(*Osmanthus*, **dentifrices** contg. abrasive granules and,  
as flavoring agents)
- IT 1344-28-1, Alumina, biological studies 7631-86-9, Silica,  
biological studies 7789-77-7, Dicalcium phosphate dihydrate  
9086-60-6, Ammonium carboxymethyl cellulose 10101-52-7, Zirconium  
silicate 12511-31-8, Magnesium aluminate metasilicate  
13463-67-7, Titanium dioxide, biological studies 30079-89-1,  
Magnesium metasilicate  
(abrasive granules contg., in manuf. of **dentifrices**)
- IT 76-22-2, Camphor 79-76-5, .gamma.-Ionone 79-77-6, .beta.-Ionone  
89-83-8, Thymol 99-49-0, Carvone 104-46-1, Anethole 104-67-6,  
.gamma.-Undecalactone 118-71-8, Maltol 120-57-0, Heliotropin  
121-32-4, Ethyl vanillin 121-33-5, Vanillin 127-41-3,  
.alpha.-Ionone 464-43-7, d-Borneol 1490-04-6, Menthol  
4940-11-8, Ethyl maltol 141441-04-5, .delta.-Ionone

(flavoring agent, **dentifrices** contg. abrasive granules and)

IT 7646-85-7, Zinc chloride, biological studies 7722-88-5  
9000-01-5, Acacia gum 9002-88-4, Polyethylene 9004-57-3, Ethyl  
cellulose  
(granules contg. abrasives and, in manuf. of **dentifrices**)

L65 ANSWER 11 OF 18 HCA COPYRIGHT 2003 ACS on STN

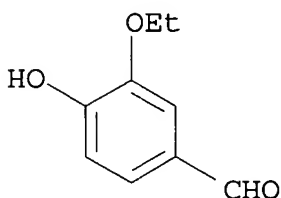
112:54096 **Chewing gum** containing aspartic acid-derived sweetener and its stabilization. (Warner-Lambert Co., USA). Jpn. Kokai Tokkyo Koho JP 01043153 A2 19890215 Heisei, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-188585 19880729. PRIORITY: US 1987-79849 19870730.

AB A method of stabilizing sweeteners derived from L-aspartic acid such as aspartame is disclosed. The method comprises prepg. (1) a gum base, a free sweetener, and org. acids; and (2) a gum base contg. flavoring agents and water-contg. agents. The ingredients 1 and 2 are arranged to form a surface-to-surface relation, or optionally the sweetener is encapsulated, so that the sweetener is not contacted with the flavoring agents and water in 2 to ensure its stability. In **chewing gum** contg. encapsulated aspartame, aspartame conversion to diketopiperazine (less sweet) was inhibited.

IT 121-32-4  
(in **chewing gum** manuf., stabilization of aspartame in relation to)

RN 121-32-4 HCA

CN Benzaldehyde, 3-ethoxy-4-hydroxy- (6CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM A23G003-30

ICS A23L001-236

CC 17-13 (Food and Feed Chemistry)

ST **chewing gum** aspartame sweetener stability

IT Chicle

Cinnamon (spice)

Flavoring materials

Gutta-percha

Jelutong

Peppermint

Sweetening agents

Vanilla

Monellins

(in **chewing gum** manuf., stabilization of

- aspartame in relation to)
- IT **Chewing gum**  
(manuf. of, stabilization of aspartame in relation to)
- IT Flavoring materials  
(cherry, in **chewing gum** manuf., stabilization  
of aspartame in relation to)
- IT Resins  
(crown **gum**, in **chewing gum** manuf.,  
stabilization of aspartame in relation to)
- IT Flavoring materials  
(fruit, in **chewing gum** manuf., stabilization  
of aspartame in relation to)
- IT Flavoring materials  
(grape, in **chewing gum** manuf., stabilization  
of aspartame in relation to)
- IT Flavoring materials  
(strawberry, in **chewing gum** manuf.,  
stabilization of aspartame in relation to)
- IT 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid,  
biological studies 57-50-1D, chloride-contg. derivs. 69-65-8,  
Mannitol 75-07-0, Acetaldehyde, biological studies 77-92-9,  
biological studies 81-07-2, Saccharin 87-69-4, biological  
studies 87-99-0, Xylitol 97-96-1 100-52-7, Benzaldehyde,  
biological studies 100-88-9D, Cyclamic acid, salts 104-55-2,  
Cinnamaldehyde 106-23-0 106-26-3, Neral 106-72-9,  
2,6-Dimethyl-5-heptenal 110-17-8, Fumaric acid, biological studies  
110-62-3, Valeraldehyde 112-31-2, Decanal 112-54-9, Dodecanal  
120-14-9, Veratrum aldehyde 120-57-0, Heliotropin 121-32-4  
121-33-5 122-40-7 123-11-5, Anisic aldehyde, biological studies  
123-72-8, Butylaldehyde 124-04-9, Hexanedioic acid, biological  
studies 124-13-0, Octanal 124-19-6, Nonanal 1083-30-3  
1334-78-7, Tollylaldehyde 1335-39-3, Hexenal 1405-86-3  
1490-04-6, Menthol 4826-62-4, 2-Dodecenal 5392-40-5, Citral  
6915-15-7, Malic acid 7779-07-9, 2,6-Dimethyloctanal 9002-88-4,  
Polyethylene 9003-20-7 9003-27-4, Polyisobutylene 9003-55-8,  
Butadiene-styrene polymer 9005-25-8D, Starch, hydrolyzates  
9010-85-9 33665-90-6, Acesulfame 57817-89-7 80863-62-3D,  
hydrate  
(in **chewing gum** manuf., stabilization of  
aspartame in relation to)
- IT 22839-47-0, Aspartame  
(stabilization of, in **chewing gum**)